MIDMARKET ROAD MAP

Microsoft has a plan for meeting the software needs of midsize companies. PAGE 10



BUSINESS OWNER

Ameritrade's Asiff Hirji discusses his move from CIO to COO and his firm's efforts to differentiate itself via IT. PAGE 20

COMPUTERWORLD

THE VOICE OF IT MANAGEMENT • WWW.COMPUTERWORLD.COM

SEPTEMBER 12, 2005 • VOL. 39 • NO. 37 • $5/COPY

SPECIAL COVERAGE: GULF COAST CATASTROPHE

Users Start to Weigh Long-Term IT Issues

Assessment process begins amid efforts to restore key systems

BY PATRICK THIBODEAU AND LUCAS MEARIAN

IT staffers at Tulane University, the largest private employer in New Orleans, were working last week to get the school's financial systems operating again after the floodwaters spurred by Hurricane Katrina surrounded its data center near the Superdome.

John Lawson, Tulane's CIO, found himself as displaced as the university's students and faculty. Lawson is staying in a Houston hotel near a temporary administrative operations center that Tulane has set up. From there, he's managing the effort to restore critical IT services and replace some of the processing capabilities previously handled by the systems in New Orleans.

But while Lawson and other IT managers are dealing with personal hardships and working to reassemble their IT operations, they're also assessing what went right and what went

IT Issues, page 6

COPING WITH KATRINA

INSIDE: Ideas abound for preventing future telecom outages. PAGE 6

The Red Cross is scrambling to tighten the security of its network. PAGE 7

Valero Energy reconnects with its Louisiana oil refineries. PAGE 7

Progress Is Slow on HIPAA Security Rules

Data mandates aren't driving health care companies to comply

BY JAIKUMAR VIJAYAN

Almost five months after the data security rules mandated by the Health Insurance Portability and Accountability Act went into effect, many health care companies still aren't fully compliant with them, according to IT managers and analysts.

They said technology, process and budgetary issues continue to delay compliance efforts, along with what is seen

HIPAA, page 69

Wi-Fi Fails to Connect With Mobile Users

BY MATT HAMBLEN

For many business travelers, public Wi-Fi hot spots are proving to be not all that hot for making remote connections to the Internet and corporate systems.

IT managers such as Bob Heindel Jr., a network technician at Idaho Power Co. in Boise, said last week that they don't want to pay a full day's fee for a short Wi-Fi session in an airport lounge or coffee shop, nor do they want to fiddle around with their PCs to set up services from a variety of hot-spot vendors.

"I do use public hot spots

Wi-Fi, page 69

NEWSPAPER

#BXBBJFT**********AUTO**5-DIGIT 48103
#0576350/CB/6# CW200537 008 6268
SHERI MARION 95
PROQUEST
MS 88
300 N ZEEB RD 57-15
ANN ARBOR MI 48103-1553

New

COMPUTERWORLD HORIZON AWARDS 2005

Under The Sun



MOHIUDDIN, PAGE 34



AGRAWAL, PAGE 41



MILLER, PAGE 29

Peek into the nation's research labs and private companies to discover their most innovative technologies, from a superfast worm blocker to software that analyzes voice recordings to gauge callers' emotions. These are among the winners of Computerworld's first annual Horizon Awards. SPECIAL REPORT BEGINS ON PAGE 29.

Online

Find a full list of the eight winners and 20 honorable mentions, with links, photos and other resources: QuickLink 56188

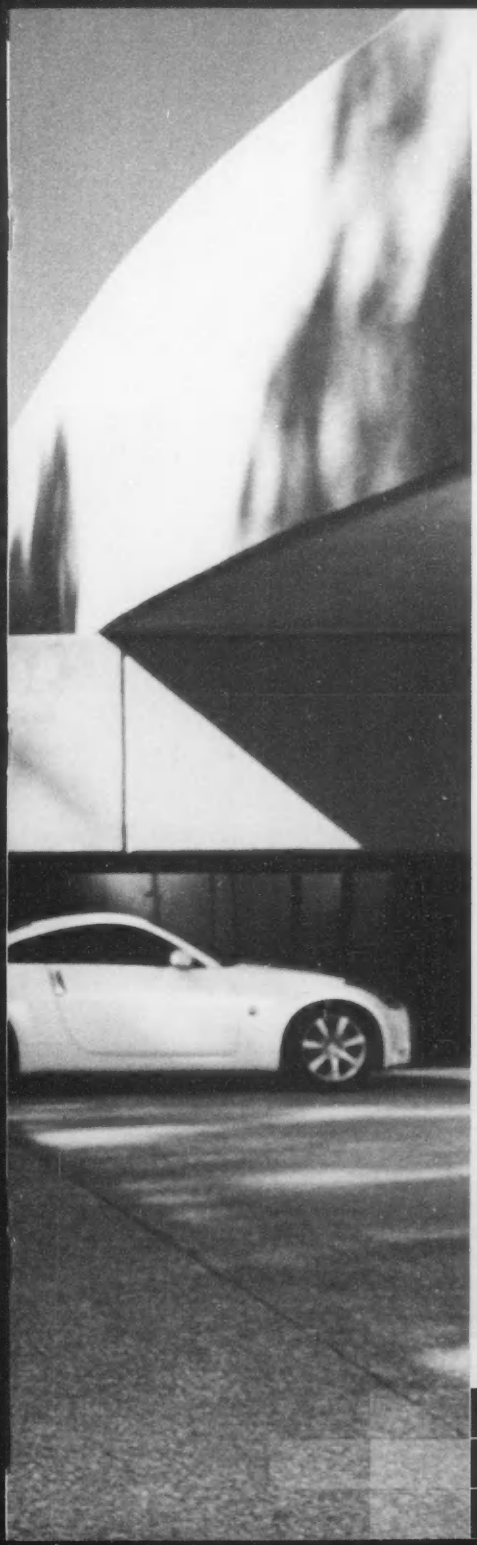
Your potential. Our passion.
Microsoft



NAME

Mr. 50,000 Global Remote and Mobile Users Connected Without a VPN.

NISSAN



"At Nissan, we expect to save at least $135 million annually thanks to the efficiencies that Windows Server 2003 and Exchange Server 2003 are helping us achieve."

Toshihiko Suda
Senior Manager, *Nissan Motor Company, Ltd.*

Make a name for yourself with Windows Server System. An upgrade to Microsoft Windows Server System made it possible for 50,000 worldwide employees at Nissan Motor Company to have more secure remote access to their e-mail and calendars from any Internet connection, without the hassle and expense of a VPN. Here's how: By deploying Windows Server 2003 and Exchange 2003, not only did Nissan IT meet the CEO's demand for better global collaboration, they expect to save at least $135 million by streamlining their messaging infrastructure. To get the full Nissan story or find a Microsoft Certified Partner, go to **microsoft.com/wssystem**

Microsoft® Windows Server System™

Windows Server System™ includes:	
Server Platform	Windows Server™
Virtualization	Virtual Server
Data Management & Analysis	SQL Server™
Communications	Exchange Server
Portals & Collaboration	Office SharePoint® Portal Server
Integration	BizTalk® Server
Management	Systems Management Server
	Microsoft® Operations Manager
Security	Internet Security & Acceleration Server

Plus other software products

WE MAKE IT WORK

FOR PRINT ASSESSMENT

Printing costs are on the rise. U.S. enterprises spend 1 to 10% of their annual revenues just on printing. You can change that. Insight's Print Assessment services can help you identify inefficiencies in your printing environment. Working with leading suppliers like HP, Insight can assess your printing needs, design and deploy an optimized print environment that provides cutting-edge output technologies at a significant savings. Put the power of print assessment to work for you.





HP LaserJet 4345mfp
Starting at $3,499.99 Q3943A#ABA

CASE STUDY:
Optimize and Save

Insight Print Assessment services helped one major medical facility increase utilization and decrease costs for its printer fleet. Using network-based tools, we identified all network and locally attached printers and collected page counts to calculate the costs of toner, ink and other consumables. Insight applied the data to develop a print optimization plan that will save the organization $500,000 in three years. Now, that's a solution with a real return.

hp invent

Insight.
IT For The Way You Work™

www.insight.com/CW ▼ 800.998.8052

Source Code: AD021

Insight and the Insight logo are registered trademarks of Insight Direct USA, Inc. IT For The Way You Work is a trademark of Insight Direct USA, Inc. All other trademarks, registered trademarks, photos, logos and illustrations are property of their respective owners.
©2005 Insight Direct USA, Inc. All rights reserved.

CONTENTS

09.12.05

High Maintenance
In the Management section: When a skilled IT worker is a spoiled brat, team morale can suffer. Here's what to do about high-maintenance employees. **Page 47**



Please Don't Upgrade Me!
Also in the Management section: Ever wonder why business people aren't always enthusiastic about IT upgrades? IT Mentor Ronald S. Lemos paints a picture from the user's point of view, and it isn't pretty. **Page 56**

NEWS

SPECIAL COVERAGE
GULF COAST CATASTROPHE

Ideas abound for preventing future telecom outages. **PAGE 6**

The Red Cross is scrambling to tighten the security of its network. **PAGE 7**

Valero Energy reconnects with its Louisiana oil refineries. **PAGE 7**

10 **Microsoft sets** a new product strategy for midsize users.

12 **Sun aims** a line of Opteron-based servers at the technical services industry.

12 **HP rolls out** upgraded tools for managing virtual servers.

14 Global Dispatches: Munich delays its move to Linux.

14 **Utility PG&E deploys** speech-recognition technology.

18 **Computer Associates** offers 14 patented technologies to open-source developers.

20 Q&A: **Ameritrade's** Asiff Hirji discusses his move from CIO to chief operating officer.

ONLINE

ONLINE DEPARTMENTS

Breaking News
QuickLink a1510

Newsletter Subscriptions
QuickLink a1430

Knowledge Centers
QuickLink a2570

Computerworld Store
QuickLink a2420

What's a QuickLink?
On some pages in this issue, you'll see a QuickLink code pointing to additional, related content on our Web site. Just enter that code into our QuickLink box, which you'll see at the top of each page on our site.

OPINIONS

8 On the Mark: **Mark Hall** reports that telecommunications vendors are taking heat from VoIP systems based on open-source PBX software. One computer science professor says the multibillion-dollar giants "know they're doomed" in the corporate market.

24 **Don Tennant** is happy about the emergence of viable wireless broadband access for business travelers because it brings a welcome alternative to Wi-Fi hot spots.

24 **David Moschella** looks into three lines of debate over that Internet darling, Google.

25 **Michael Gartenberg** has been disappointed by most pen-based computing efforts, but he sees a ray of hope.

60 **Bart Perkins** explains what makes executive sponsors truly effective. They're crucial to an IT project's success, but only if they do what they ought to be doing.

70 **Frankly Speaking: Frank Hayes** believes FEMA's IT choices have helped make the aftermath of Hurricane Katrina a little worse for Gulf Coast survivors.

DEPARTMENTS/RESOURCES

At Deadline Briefs 8
News Briefs 12, 16
Letters 25
IT Careers 63
Company Index 67
How to Contact CW 67
Shark Tank 70

COMPUTERWORLD HORIZON AWARDS

New Under the Sun.

SPECIAL REPORT

Take a look inside the research labs and private companies that earned top honors in our first annual Computerworld Horizon Awards.
PACKAGE BEGINS ON PAGE 29.

29 **NetScout's** Progressive Analytics technology detects anomalies by analyzing network traffic in real time and comparing it with normal patterns of behavior.

30 **Nice Systems'** Nice Perform analyzes call center voice recordings to monitor compliance with legislation and raise productivity.

34 **IBM Almaden Research Center's** Intelligent Bricks hardware and Kybos software work together to make data storage easier to manage, lower maintenance costs and reduce environmental impact.

36 **Microsoft Research's** Vigilante detects fast-replicating worms, generates protective "filters" against them and sends alerts to other machines on the network.

36 The highly portable, object-oriented format of **Python Software Foundation's** Python has made it a darling in the open-source community, and a fresh entry into enterprise application development.

40 **Sun Labs'** proximity communication transmits data between chips that are extremely close to one another, allowing for communication that's 60 times faster than with conventional circuit boards.

41 **IBM Almaden Research Center's** Sovereign Information Integration creates double-encrypted data that won't violate disclosure rules and can be shared via a Web-based query interface.

44 **PubSub Concepts'** Prospective Search offers a free service that scours millions of Internet sources for news as it happens, says PubSub co-founder Bob Wyman.

44 **Awards Panelists.** Meet the scouts and judges who helped find and evaluate these technologies.

ONLINE
For a full listing of the eight award winners and 20 honorable mentions, as well as resource links and team photos, visit our Web site:
QuickLink 56188

WWW.COMPUTERWORLD.COM

OPINION: Gus Tai, a general partner at Trinity Ventures, identifies emerging enterprise technologies and venture opportunities. Plus, read his blog.
QuickLink 56617

R&D SOURCES. Where are the cutting-edge tools of tomorrow being developed? Find a listing of research associations as well as corporate research and development groups and university and government labs where technologies such as those honored in this year's Computerworld Horizon Awards are being developed.
QuickLink 56123

SPECIAL COVERAGE: GULF COAST CATASTROPHE

Telecom Focuses on Ways To Avoid Repeat of Outages

Sees the need to harden networks so they can better withstand damage

BY MATT HAMBLEN

NEW TECHNOLOGIES and improved emergency procedures could help avoid prolonged communications outages should another disaster of the same magnitude as Hurricane Katrina strike the U.S., IT managers and analysts said last week.

Their ideas range from making sure that cellular and land-line telephone switches are located well above sea level to more unusual suggestions, including the use of emerging WiMax technologies and mesh networks — or even putting radio transceivers aboard blimps that could be flown to a disaster zone.

Several analysts said the private sector could also bolster its communications preparedness by setting up consortiums to buy portable cellular sites or satellite communications equipment that could be shared during emergencies.

The question of how to better protect telecommunications systems is expected to get a lot of attention because of the massive outages caused by Katrina, which knocked out both cellular and land-line links in the disaster area.

Worst-Case Scenarios

"A lot of people will be looking at what happened with communications after Katrina to see what could be done better in the next worst-case scenario, because this is the worst-case scenario," said Charles Fleckenstein, a spokesman for Sprint Nextel Corp. who was speaking from Baton Rouge, La.

Fleckenstein described situations where repair crews found cellular towers under water and without connections to local telephone systems because "entire neighborhoods no longer exist."

And despite what were described as Herculean efforts by repair crews, several telecommunications carriers said that cellular and land-line services in New Orleans were still spotty nine days after Katrina came ashore.

A common theme last week was the need to bolster the nation's telecommunications infrastructure.

"You could go on and on, but the bottom line is that you need to harden systems," said Ken Dulaney, an analyst at Gartner Inc.

For example, as New Orleans is rebuilt, cellular carriers should raise their entire communications systems above the flood plain, providing wireless connections to cell towers both for links to end users and to switching stations, he said.



"Our cities were really designed for the horse and buggy."

HOSSEIN ESLAMBOLCHI
CIO, AT&T CORP.

Hossein Eslambolchi, AT&T Corp.'s CIO, said city planners and utilities nationwide need to work together to harden fiber-optic infrastructures, making the duct system that carries the fiber waterproof.

"Our cities were really designed for the horse and buggy centuries ago, with communications added above that, so you need to redesign and rethink," he said.

Eslambolchi even suggested that telecommunications vendors should consider powering their base stations and central switching offices with alternate energy sources such as solar cells.

Scott Midkiff, a professor of electrical and computer engineering at the Virginia Polytechnic Institute and State University in Blacksburg, said wireless mesh technologies are "very promising" because they enable network topologies to be dynamically changed in response to outages, helping to make networks self-healing.

Even a cellular base station aboard a blimp or other airborne vehicle is "not a crazy idea," Midkiff said, noting that the military has demonstrated the concept. 56722

Continued from page 1

IT Issues

wrong with their disaster recovery plans. And they're starting to consider some big IT issues that will have to be decided in the months ahead, such as whether to keep their data centers in New Orleans once it's inhabitable again.

Located on the 43rd floor of a downtown office building, the data center of Adams and Reese LLP, a New Orleans law firm, was safely above the floodwaters, said CIO David Erwin.

But whether Adams and Reese's data center will remain in New Orleans "is to be debated," Erwin said. "If the [Army] Corps of Engineers doesn't come up with a better levee system, probably not."

Tulane's data center is on the 14th floor of a high-rise building and is also intact and dry, though without power, Lawson said. But he doesn't know when the data center will be operational again.

"That's really dependent on the city," he said, indicating that the location of the data center is one of the long-term issues he will have to evaluate.

Since the storm, Tulane has hired SunGard Data Systems Inc.'s outsourcing service to load data from the school's student information systems and payroll application from backup tapes onto a mainframe at a SunGard facility in Voorhees, N.J. Lawson hoped to have those systems up and running again by Friday.

Tulane's IT staff began backing up data before the hurricane struck on Aug. 29. But when workers came to move the tapes to an off-site location as Katrina began its assault on the Gulf Coast, the building where the data center is located was closed and locked down. Staffers had to return to the dark and hot building in the days following the hurricane to get the tapes. As a result of that experience, Lawson said he plans to look into doing online backups.



PUMPS began removing water from New Orleans last week.

The hurricane's aftermath also revealed some weaknesses in disaster recovery planning at Adams and Reese. For instance, the law firm had stored backup tapes at an off-site location, but that site was also in New Orleans and couldn't be accessed by the firm's IT staffers. "That's a lesson learned," Erwin said.

However, Erwin had started online backups in advance of the storm, and he said his data is safe on servers in satellite offices. In addition, Adams and Reese used MessageOne Inc.'s messaging fail-over system to provide continued e-mail access to its employees.

Telecommunications and Internet access issues have risen to the top of the priority list for many IT managers in the Gulf Coast region.

Malcolm Martin, support services administrator and comptroller at Montgomery, Barnett, Brown, Read, Hammond & Mintz LLP, said the New Orleans law firm's office was decimated by Katrina, forcing him to rent space in an empty office building in the state capital of Baton Rouge.

One change Martin said he will make is to set up a toll-free telephone number outside of the South to give employees a central way to communicate with one another.

"That would have saved us two days' time" that was spent contacting employees, Martin said over a newly installed satellite phone connection.

Martin contracted with a disaster recovery company just three months ago — a move that he's now especially glad he made. As part of the deal, Charlotte, N.C.-based Agility Recovery Solutions Inc. installed the satellite phones plus the servers, workstations and software needed to replicate the law firm's front- and back-office systems.

In order to meet the demand it's seeing for temporary facilities, Louisiana Technology Park LLC, a Baton Rouge-based IT business incubator, is increasing the amount of work spaces in its facility.

Doug Lee, the technology park's executive director, said many of the IT managers he has spoken with never believed the area would experience the devastation it did.

"They left dogs tied up on the porches and their servers not terribly high and dry," Lee said. "I even had calls from companies that said, 'All I got is a backup tape and the shirt on my back — what can we do?' " 56720

SPECIAL COVERAGE: GULF COAST CATASTROPHE

Red Cross Works to Better Protect Its Networks From Attacks, Scams

CISO says relief agency seeks help as traffic surges

BY JAIKUMAR VIJAYAN

Information security staffers at the American Red Cross, which was hit last month by the Zotob worm, are working overtime to try to protect the organization's networks against attacks amid surges in usage of the networks following Hurricane Katrina.

In addition, the emergency relief agency has turned to the FBI and others for help in preventing the spread of imitation Red Cross Web sites set up by scam artists.

"The infrastructure is stretched, and I'm not sure we can tolerate another outbreak" like the Zotob attack, said Ron Baklarz, the Washington-based organization's chief information security officer.

Zotob, which took advantage of a hole in the plug-and-play component in Microsoft Corp.'s Windows software, "saturated" sections of the Red Cross' networks, making them inaccessible to users for several hours last month, Baklarz said.

Consequently, the organization turned to security experts to "take a second look at the security technologies we have in place today to ensure that we have tuned them as best as we can under the increased load," he said.

The Red Cross is implementing new technologies such as intrusion-detection and -prevention systems — some of them donated by vendors — to bolster network security, said Baklarz.

Also, not all of the Web sites that the Red Cross has created for remote field offices set up to aid Katrina victims have a direct link back to the organization's network.

"We are trying to put Web-based applications out there that can be accessed without people coming to the corporate network," Baklarz said without elaborating.

The Red Cross is working with the FBI Internet Fraud Complaint Center to shut down sites allegedly created by scam artists involved in Katrina-related fraud.

"We anticipated there would be a lot of fraudulent activity on the Internet," Baklarz said. "We wanted to triage with the FBI and make sure they saw examples of the legitimate e-mail that is sent out from the Red Cross so that they know what to look for."

Appeals have also been sent to organizations such as Bethesda, Md.-based SANS Institute and various government and nongovernmental agencies to keep an eye out for anything that looks like a scam, Baklarz said. As of last Thursday, about 20 such sites had been identified and were being investigated by the FBI for possible follow-up action.

"Every time an event like this occurs, it brings out the best and the worst in people," Baklarz said. "Unfortunately, in my position, I've got to think about and respond to the worst." 56719

After Katrina, Energy Firm Turns to Satellite Systems

The oil and gas companies that operate refineries along the Gulf Coast suffered extensive equipment damage and telecommunications disruptions during and after Hurricane Katrina.

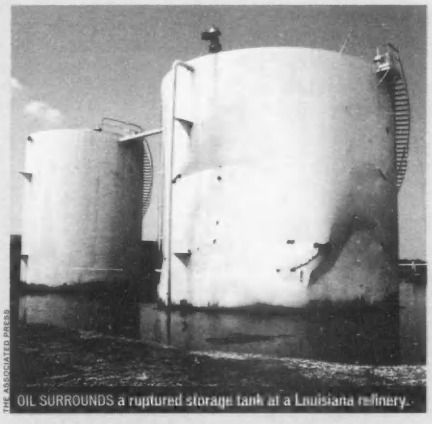
But San Antonio-based Valero Energy Corp. has been able to work through many of those challenges over the past two weeks, in part by making use of satellite communications, said CIO Hal Zesch.

Valero is now using about 20 satellite phones and about 40 cell/radio phones to let workers communicate between its San Antonio refinery and its St. Charles and Krotz Springs refineries in southern Louisiana.

Both Louisiana refineries were directly affected by Katrina, said Rick Davis, a senior IT manager who is coordinating Valero's posthurricane information services activities.

Over Labor Day weekend, the Krotz Springs refinery resumed normal operations and is now operating at full capacity. The St. Charles facility regained all of its utilities last Tuesday and was almost fully operational late last week, Zesch said.

Valero has 10 information services employees in the Gulf area working to restore IT systems there. Four traveled from San Antonio, while the rest were already stationed in southern Louisiana, Zesch said.



THE ASSOCIATED PRESS

OIL SURROUNDS a ruptured storage tank at a Louisiana refinery.

In addition, Valero last weekend set up connections in San Antonio to an IP phone switch at the St. Charles facility to support satellite voice communications.

The company also used satellite technology to re-establish communications with 14 of its retail gasoline stations that are located between New Orleans and Lafayette, La., as well as with three in the Shreveport, La., area, said Davis.

The satellite communications capabilities have been extremely useful, Davis said. He noted that Valero's St. Charles refinery did not have its land lines restored until late last week, 10 days after the hurricane hit.

In the immediate aftermath of the storm, Valero set up a 24-hour call center in San Antonio that its 1,000 workers in Louisiana, Alabama and Mississippi could contact to report how they were faring, where they were located and what they needed.

Valero also posted the call center phone numbers on its corporate Web site.

– Thomas Hoffman

Iron Mountain Says Its Data Archives Seem Mostly Intact

Firm begins to inspect four area storage facilities

BY LUCAS MEARIAN

Iron Mountain Inc. said last week that it had begun inspecting its four off-site data storage facilities in the New Orleans area and had yet to find any computer disks or tapes that were directly damaged by Hurricane Katrina.

However, Bob Brennan, president of Iron Mountain North America, said he could not guarantee customers that the media stored in the facilities is completely undamaged. In a statement posted on its Web site last Tuesday, meanwhile, the company said it can't "determine to what extent [archived data] has been compromised until a full evaluation can be completed."

Workers from Boston-based Iron Mountain were unable to enter any of the facilities for more than a week because the areas around the buildings were cordoned off due to flooding. The company wasn't allowed to access the last of the facilities until Friday.

The four buildings contain archived data from about 600 customers. Brennan said that a recovery team has begun removing tapes and disks from the storage vaults and transporting them to facilities in Baton Rouge.

There was no "substantial" flooding in any of the first three buildings that Iron Mountain accessed, Brennan said. The company said the fourth facility also appeared to be relatively unscathed.

Iron Mountain has set up a command and control center in Atlanta to coordinate its operations in the disaster area. And the company is learning some lessons for managing future crisis situations. "One of the things I'll ask for in the future is that we have a deeper [contact] tree on the next of kin for all of our employees, so we have more ways to get in touch with them," said Brennan. He noted that Iron Mountain located the last of its 107 New Orleans-area employees last Wednesday. 56690

AT DEADLINE

Japanese Vendor to Acquire PalmSource

Access Co., a Tokyo-based maker of embedded Web browsers, announced that it has agreed to acquire PalmSource Inc. and its Palm operating system for about $324.3 million. Access said it hopes PalmSource, which spun out of Palm Inc. in 2003, can boost its mobile content delivery and Internet access software business. The deal is expected to close by the end of the year.

Google Hires Internet Pioneer

Google Inc. has hired Internet pioneer Vinton Cerf as its chief Internet evangelist. Cerf resigned his post as vice president of technology strategy at MCI Inc. Google said Cerf, a co-designer of TCP/IP, will help Google build network infrastructures, architectures, systems and standards for the next generation of the Internet.

Dell Won't Contest AMD Subpoena

Dell Inc. doesn't plan to contest a subpoena from Advanced Micro Devices Inc. asking for documents related to its purchases of Intel Corp. processors in recent years. Dell also agreed to preserve relevant e-mail from executives as part of AMD's antitrust lawsuit against Intel. Unlike NEC Corp. and U.K. PC retailer Dixons Group PLC, Dell didn't file any objections to AMD's request for documentation.

Former HP CEO Platt Dies at 64

Lew Platt, 64, who rose through the ranks from entry-level engineer to CEO of Hewlett-Packard Co., died last week. Platt joined HP in 1966 and succeeded co-founder David Packard as chairman in 1993. He left the company in 1999. At the time of his death, Platt was lead director of The Boeing Co. He had been chairman for two years before stepping down in July.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

SBC, Verizon, Qwest Quake in Fear . . .

. . . as open-source private branch exchange software with integrated voice-over-IP capabilities gains adherents. "I believe they already know they're doomed," suggests Brian Capouch, chairman of the computer science department at Saint Joseph's College in Rensselaer, Ind.

$7.6B IDC's estimate of VoIP service revenues in 2008.

Capouch argues that giant telecommunications providers and PBX manufacturing goliaths don't stand a chance against perky startups such as Huntsville, Ala.-based Digium Inc. and San Diego-based Four Loop Technologies LLC, which does business under the name Switchvox. Those vendors use Asterisk, an open-source technology that lets companies replace their PBX systems and use VoIP to transmit phone calls. Switchvox CEO Joshua Stephens says Asterisk lets you use a standard Linux server to connect to your network via a T1 line for traditional analog calls or to your Internet service provider to support chat via VoIP. Switchvox's system also handles voice mail like e-mail, meaning you can listen to it, forward it, store it and do anything to voice messages that you can do to e-mail, claims Stephens. Switchvox 2.0 ships at the end of this month and will add conference-room, intercom, call-parking and other new features. Pricing starts at $995.

Capouch says Asterisk and VoIP combined will do to the telecom market what Linux, Apache, MySQL and other open-source technologies have done to the data center: "radically change the landscape." Capouch shrugs off the argument that perceived problems with VoIP call quality may hinder adoption. "Cell phones have lowered people's quality expectations," he notes.

$203B IDC's estimate for fixed-line voice revenues in 2008.

Big ERP vendors are next in line . . .

. . . for an open-source onslaught. Jorg Janke, founder of ComPiere Inc. in Portland, Ore., doesn't argue that SAP AG, Oracle Corp., Lawson Software Inc. and other ERP vendors are doomed by his company's eponymous open-source applications. But he does point to the 900,000 downloads of the software as a measure of its success and to the fact that it took Oracle a long time to be considered a serious player in the global ERP market. And he should know, since he was the first employee that Oracle hired in Germany to help the company compete against SAP. Janke claims that Compiere has 100% availability "not because it's fail-safe, but because it fails safely." He says that developers who try to make perfect software aren't living in the real world. By expecting glitches, Janke builds in persistent consistency checks so Compiere can always revert to the most recent consistent state should a problem occur. Compiere runs on top of an Oracle or Sybase Inc. database; by year's end, it will also work with DB2, SQL Server and the Derby open-source database. Naturally, the software is free, but you can pay $1,500 per year to get support for 10 end users.



JANKE: There's no perfect software.



JETTER says companies need a "visual vocabulary."

Information overload? Consider mapping . . .

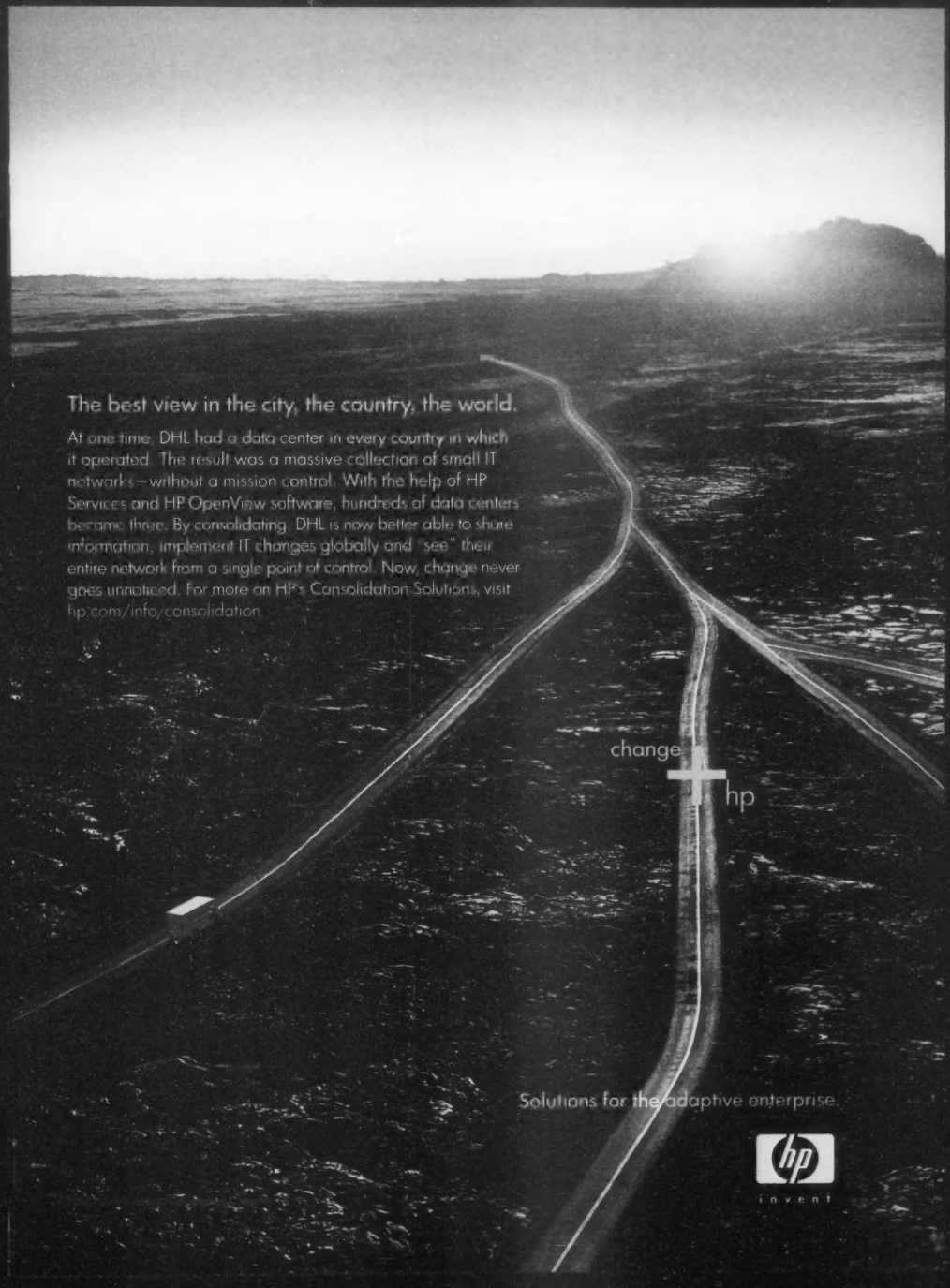
. . . your data instead of reading it. Robert Gordon, CEO of Mindjet Corp. in Larkspur, Calif., thinks your company's employees will appreciate visualizing data because most workers "are not able to access information and work with it to do their jobs properly." Mindjet's MindManager software uses hyperlinks to visually connect data from disparate sources on your network. The software works much like a shared whiteboard. But instead of scrawling text by hand, you add color-coded links to data housed in ERP or CRM apps, spreadsheets, e-mail messages and other information sources, creating a single, unified view. Michael Jetter, Mindjet's chief technology officer, says MindManager "is like a visual vocabulary" for discussing corporate issues. Version 6.0, an upgrade set to ship next week, lets you insert Excel cells into MindManager and change the values, which are then automatically updated in the spreadsheet. Pricing starts at $350.

Firefox gets single sign-on support . . .

. . . in a new software release from ActivCard Corp. According to Jason Hart, senior vice president of sales and marketing at the Fremont, Calif.-based security vendor, ActivCard will be among the first single sign-on vendors whose software will work with the Firefox browser. Hart says the user interface for Version 5 of ActivCard Secure Login Single Sign On, which begins shipping today, has been made more intuitive. The new release also improves deployment and management by adding wizards so security administrators no longer have to use scripts to link the tool to the applications that it will help secure. Pricing starts at $79.



56672


The best view in the city, the country, the world.
At one time, DHL had a data center in every country in which it operated. The result was a massive collection of small IT networks—without a mission control. With the help of HP Services and HP OpenView software, hundreds of data centers became three. By consolidating, DHL is now better able to share information, implement IT changes globally and "see" their entire network from a single point of control. Now, change never goes unnoticed. For more on HP's Consolidation Solutions, visit hp.com/info/consolidation
change
hp
Solutions for the adaptive enterprise.
invent

STOP SEARCHING.

Looking for a way to lower your compliance costs and increase the efficiency of your IT infrastructure while growing your business? Discover HP Compliance and Consolidation solutions. Visit the IDG-HP Enterprise Center featuring industry insights by IDC, and get your free executive brief today.



Consolidation:
IT consolidation is gathering steam in the marketplace as companies of all types struggle with increasing infrastructure demands, smaller budgets, and changing business practices. This report identifies the current drivers for IT consolidation, describes the benefits and types of consolidation, and provides advice on selecting the right IT consolidation vendor.



Compliance:
Government regulations such as HIPAA, Sarbanes-Oxley, and Gramm-Leach-Bliley have placed unprecedented pressure on companies to secure the authoring, updating, publishing, and archiving of their electronic documents and communications. This report examines the new regulatory demands and describes how companies can leverage compliance technology and processes for greater business advantage.

START FINDING.

www.idgpartners.com/ec
Click to download free executive briefs, case studies and to find out how HP solutions can help you.

IDG
INTERNATIONAL DATA GROUP

hp
invent

GridWorld™

Grid in Action: Explore. Adopt. Deploy.

GridWorld™ is the premier B2B conference focused on the commercial benefits of grid computing for Enterprise IT strategists, worldwide.

WORLD-CLASS KEYNOTES: **Opening keynote by Gary Beach, Group Publisher, CIO Magazine will set the context and help frame this robust program**



Gary Beach
Group Publisher
CIO Magazine



Steve Yatko
Global Head of IT Research & Development
Credit Suisse First Boston



Takehiko Kato
President
Engineous Japan



Frank Falcon
Grid Delivery Manager
British Telecom

Boston Park Plaza Hotel & Towers • Boston, Massachusetts • October 3-6, 2005

Join us for the only educational conference to help Enterprise IT professionals build a business case/road map for the enterprise.

TWO POWER PACKED DAYS TACKLING THE LATEST ISSUES AROUND GRID DEPLOYMENT:

- Learn vicariously from **a large multi-national bank's global Grid deployment**
- Explore Software **Licensing Models** for Grids
- Understand the positive implications of **IT as a Service**
- Find out how Grid technology is **speeding up the early stages of drug discovery**
- Explore the reality and future of Grids in the context of related technologies like **virtualization, automation and service orientation**

SPECIAL OFFER FOR Computerworld SUBSCRIBERS

Use Priority Code: D0103

And SAVE an ADDITIONAL 20% OFF Full Registration Pricing

(Offer expires October 1, 2005)

Up to $299 Value

Brought to you by:

IDG WORLD EXPO

GGF

Register today at: gridworldhome.com

© 2005 IDG World Expo Corp. All rights reserved. GridWorld is a trademark of International Data Group, Inc. All other trademarks contained herein are the property of their respective owners.

Microsoft Maps New Midsize Market Strategy

Plans include a server software bundle, role-based business apps

BY CAROL SLIWA

MICROSOFT CORP. last week said it plans to deliver a new server software infrastructure package for midsize companies, plus role-based business applications that will be tailored to meet the needs of businesses with 50 to 1,000 employees.

Microsoft pegged the size of the market it's targeting at 1.4 million companies worldwide while outlining its long-term technology vision for midsize users during a summit meeting at the company's Redmond, Wash., campus. It described the midmarket as "underserved" by IT vendors.

But the midmarket includes a wide variety of industries with different requirements. Illustrating the challenges that Microsoft faces in trying to package software for such a broad customer base, some users expressed keen interest in the new and upcoming offerings, while others voiced doubts that the products will meet their specific needs.

John-Mark Tucker, IT manager at Seattle-based Red Dot Corp., said the idea of role-based applications wouldn't fly at his company "because I can guarantee you that every person you define — salesperson, executive — is going to want some feature" that the software doesn't define as being part of their roles.

Not Sold

Red Dot, a 500-employee company that makes heating and air conditioning products for the heavy vehicle industry, recently purchased Oracle Corp.'s business applications after taking a serious look at Microsoft's Navision software.

The promised server bundle, code-named Centro, probably won't be high on Red Dot's priority list either, according to Tucker. He said he thinks it's a great idea, but Red Dot already has 26 Windows servers that run its Exchange messaging, file-and-print and Web applications, plus its databases and electronic data interchange software.

On the other hand, David Chamberlain, a senior developer at Cleveland-based law firm Baker & Hostetler LLP, said he likes the idea of the roles as long as the application templates can be customized. Microsoft's plan will "at least give you a basis" for the scope of capabilities that different users need, Chamberlain said.

Centro will bundle upcoming versions of Windows Server, Exchange and Microsoft's System Center management software and security tools. But it will be a long time coming: Centro is expected to ship in 2007 or 2008, after the next major version of Windows Server, code-named Longhorn, according to Bob Muglia, senior vice president of Microsoft's Windows Server division.

Muglia said Centro is aimed at companies with staffs of one to five IT generalists who typically are so busy fighting internal fires that they don't have time to "focus on what drives business advantage." Although Microsoft's existing products meet the needs of such businesses, "they're too tough to use," he added.

The role-based versions of Microsoft's various ERP and CRM applications, which are now being grouped under a single Microsoft Dynamics brand, will feature special user interfaces for 50 different groups of end users. Starting this fall, the company plans to release new versions of the applications with the role-based features and further integration with Office, SharePoint Portal Server and SQL Server Reporting Services.

Bill Gates, Microsoft's chairman and chief software architect, said employees at more than 750 midsize companies were interviewed in an effort to learn how they do their work and how IT could make a difference for them.

PrintingForLess.com Inc. in Livingston, Mont., already uses a role-based system that it developed in-house. But it still expects to take a serious look at Microsoft's new application offerings, said James Schubring, the printing company's director of business development.

Centro, though, isn't expected to hold much appeal. Schubring said PrintingForLess opted for an externally hosted messaging system and Eudora mail clients because of concerns about security vulnerabilities in Exchange.

Mika Krammer, an analyst at Gartner Inc., said Centro could ease the transition to Longhorn for midsize users. But, she added, "Microsoft still has some work to do to get to know this market." 56721

Upcoming Apps

Microsoft said it's working on two "waves" of updates to its ERP and CRM applications.

WAVE 1 (2005-2007)

- Role-based user interfaces
- SharePoint-based portal and workflow capabilities
- Contextual business intelligence features built around SQL Server
- Integration support via Web services

WAVE 2 (2008 AND BEYOND)

- Modular business process configuration
- Enhanced Visual Studio tools
- A "best of" process library
- A shift to a unified code base for the Dynamics applications

Microsoft Lodges Another Appeal of European Ruling

MICROSOFT LAST WEEK said it has lodged a new appeal against the European Commission's antitrust ruling as it continues to try to short-circuit any effort to force it to make its communications protocols available to competitors.

The complaint follows Microsoft's receipt of a letter from the EC outlining its decision not to accept the terms under which the company was prepared to make available the communications protocols for its workgroup server software.

In its negotiations with the EC, Microsoft has refused to allow its source code to be licensed under the General Public License, which lets users freely modify and redistribute software, among other things.

Microsoft and the EC had agreed in June to let the European Court of First Instance settle the communications protocol issue. A Microsoft spokesman said the latest suit was filed to ensure that the company's side in the dispute is studied closely by the court.

"We are taking this step so the court can begin its review of this issue now, given its far-reaching implications for the protection of our intellectual property rights around the world," the spokesman said.

Since the issue of underlying source code wasn't explicitly mentioned in the commission's initial antitrust ruling in March 2004 or in the company's appeal lodged last year, Microsoft wants to make sure the court focuses on that aspect, the spokesman said.

Meanwhile, the EC continues to seek responses from Microsoft rivals and other industry players about the terms that Microsoft has offered to settle the complaints, commission spokesman Jonathan Todd said last week.

– Simon Taylor, IDG News Service

Windows Flaw Due to Be Patched

MICROSOFT'S monthly release of security fixes, due tomorrow, will cover only one vulnerability: an unidentified flaw in Windows.

However, the security hole is rated as critical in severity, meaning that a computer worm or virus could take advantage of the flaw without any action on the part of users. Microsoft last week said that in addition to a software patch designed to plug the Windows vulnerability, it plans to release a "high-priority" update for the operating system that isn't related to any security issues.

The company will also issue an updated version of its tool for removing malicious software from Windows-based systems. It declined to provide further information about any of the planned updates until tomorrow.

When Microsoft releases a large number of patches, IT managers can spend a significant amount of time testing the new software to make sure it works with their applications. But with only one bug being patched this month, the process should be much easier to manage, said Steve Manzuik, a product manager in the research group at eEye Digital Security Inc. in Aliso Viejo, Calif.

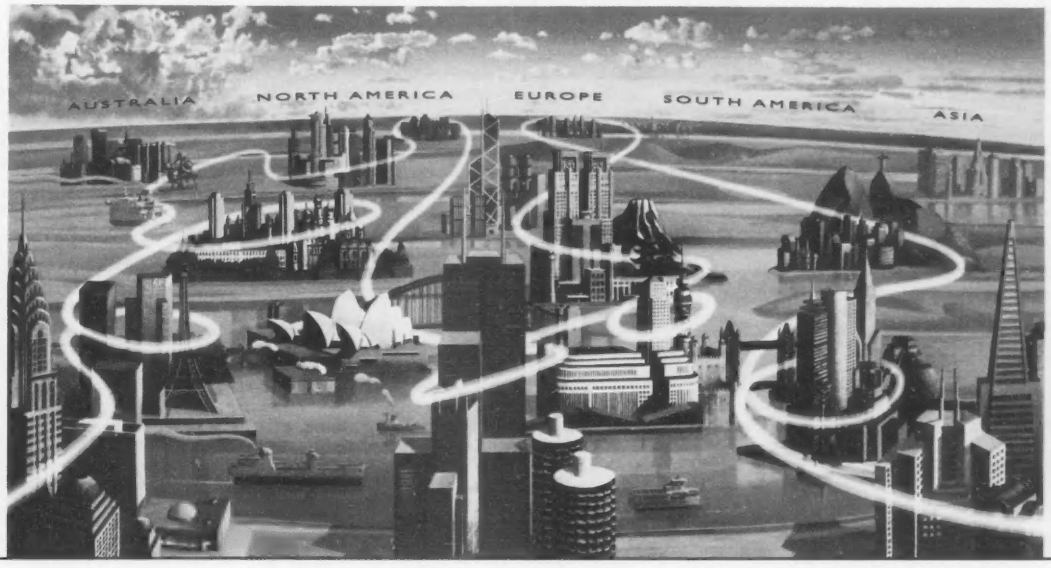
"I think September will be quiet," Manzuik said. "When we get the six, seven, eight or nine patches, it gets to be a bit more difficult."

– Robert McMillan, IDG News Service

© 2000 Global Crossing Limited and Global Crossing Holdings Limited. All rights reserved.

THE NEW GLOBAL VILLAGE.

COURTESY: THE WORLD'S LARGEST, WHOLLY-OWNED, CONVERGED, GLOBAL IP NETWORK.



Reserve your place at the absolute center of a new, instantly accessible world of frictionless commerce. A world we pioneered. Over a single IP connection, all your business applications can be seamlessly converged and totally secured over Global Crossing IP VPN, VoIP, iVideoconferencing™ services. Over a single IP connection, you are moments away from your offices, your sales staff, your partners and anywhere in the world managed by engineers and support staff who understand what customers need. And you can have this new, accessible world without changing a thing in the infrastructure you have in place now. Sound too perfect to be true? Ask the 40% of the FORTUNE 500® companies we're doing business with today. The new global village. It's time you moved in. For more detailed information, point your browser to globalcrossing.com.

Global Crossing®

One planet. One network.™ Infinite possibilities.

BRIEFS

Symantec Issues Antivirus Bug Patch

Symantec Corp. has issued a patch for a vulnerability in its corporate antivirus software that could allow unauthorized persons to access a company's servers. The flaw in Version 9 of AntiVirus Corporate Edition exposes the server log-in name and password used by the administrator who authorizes updates to the software.

Peer 1 Buys Servers From Interland

Peer 1 Network Enterprises Inc. has acquired the dedicated server assets of Interland Inc., a provider of Web sites and online services, for $14 million. The assets include data centers in Fremont, Calif., Atlanta and Miami that cover a combined total of more than 115,000 square feet and house about 8,300 dedicated servers.

Microsoft Updates Keyboard, Mice

Microsoft Corp. has overhauled its line of keyboards and mice. The vendor's keyboards had featured the same design for 10 years, but the line now includes the new Natural Ergonomic Keyboard 4000, a split model that offers improved angles designed to reduce motion and allow users to type in a more natural position. Microsoft's Wireless Laser Mouse 6000 and Wireless Optical Mouse 5000 feature updated sensors and Zoom Slider and Magnifier buttons.

Judge Rules Against Kazaa on Copyright

A judge in Australia has ruled that the operators of the Kazaa file-sharing network authorized widespread violations of copyrighted works and ordered that significant changes be made to the service. The decision stopped short of shutting down the peer-to-peer file-sharing service, but it did order that changes be made to prevent, to the extent possible, any further copyright violations.

Sun Unveils 64-Bit Galaxy Server Line

Opteron-based systems run Linux, Unix and Windows

BY LUCAS MEARIAN

SUN Microsystems Inc. today is unveiling a new line of 64-bit servers said to offer a significant performance boost, with support for Unix, Linux and Windows.

Sun officials said the new line targets the financial services industry, the bedrock of the company's server sales.

The Sun Fire x64 servers, which carried the widely known Galaxy code name, are about one quarter the size of the UltraSparc-based systems they are replacing, said Donna Rubin, senior director of financial services strategy and marketing at Sun.

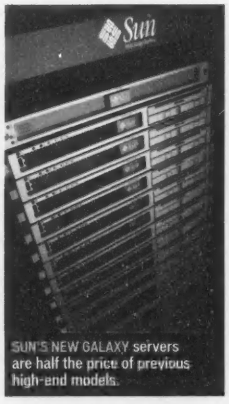
Rubin also said the new Galaxy servers can be rack-mounted, and they are half the price and use about one-third the power of the previous high-end models.

Steve Rubinow, New York-based chief technology officer at electronic trading exchange Archipelago Holdings Inc., said he expects to purchase an as yet undetermined number of new Galaxy servers to replace some of the company's 100 installed Sun servers that are based on older technology.

"Anything smaller and not terribly hotter is attractive to us. The faster, cheaper, smaller thing is headed in the right direction," he said.

Bill Morgan, CIO at Philadelphia Stock Exchange Inc., said his firm currently has 50 Sun servers, mostly based on UltraSparc 3 and UltraSparc 4 chip technology. Morgan said he wouldn't consider a purchase of the new servers until next year at the earliest.

"Capacity in the securities industry right now is certainly a challenge for everybody, especially with regard to market data," Morgan said. "To the extent that these new machines do what they say and you can implement them easily without a lot of application adjustments is a win for Sun. It's certainly something I'm interested in."



SUN'S NEW GALAXY servers are half the price of previous high-end models.

The Galaxy servers, based on AMD Opteron dual-core processors, start with an entry-level single-processor model and expand to an eight-way system. The dual-core processors offer the ability to run two applications on a single chip.

Sun said the servers will start at $745 retail for an entry-level box and at $2,595 for a midrange model.

Rubin said the range of servers offers companies the ability to standardize on the systems across their entire IT infrastructures.

"This is their big splash going into the x86 space," said IDC analyst Jean Bozman.

She agreed that the new servers are a good fit for the financial services industry because they can run a variety of operating systems across a single line of servers, playing into the Linux and Windows clustering trend.

"A lot of people continue to use Sun on Wall Street. They have a lot of investment in Sun software," Bozman said. "What you see in this announcement is they have to broaden their offerings to reach that broader audience." **56717**

HP Upgrades Software for Managing Virtual Servers

Adds tool for capacity planning

BY PATRICK THIBODEAU

Hewlett-Packard Co. today is due to announce upgraded management and planning tools for its server virtualization technology, as well as training services that are intended to break down cultural barriers to the adoption of virtualization within companies.

Among the new tools being offered as part of HP's Integrity Essentials product line is a capacity adviser, which looks at virtual server workloads and expected growth rates and recommends a configuration that achieves maximum server utilization levels. That tool is designed to help users avoid situations in which multiple applications run out of computing resources, said Nick van der Zweep, director of virtualization and utility computing at HP.

A new virtualization manager will provide a console for managing physical and virtual resources, said van der Zweep. HP is also extending an automated server resource management tool, called Global Workload Manager, to support the OpenVMS operating system on its Integrity servers. The software currently runs on HP-UX and Linux.

Like all hardware vendors, HP expects a steady increase in virtualization on high-end servers as IT departments seek to consolidate resources. But often, IT managers who are used to running dedicated servers have questions about budget issues if two departments start sharing resources. They are also typically concerned about whether applications running in a virtual environment will create problems for one another.

Losing Control

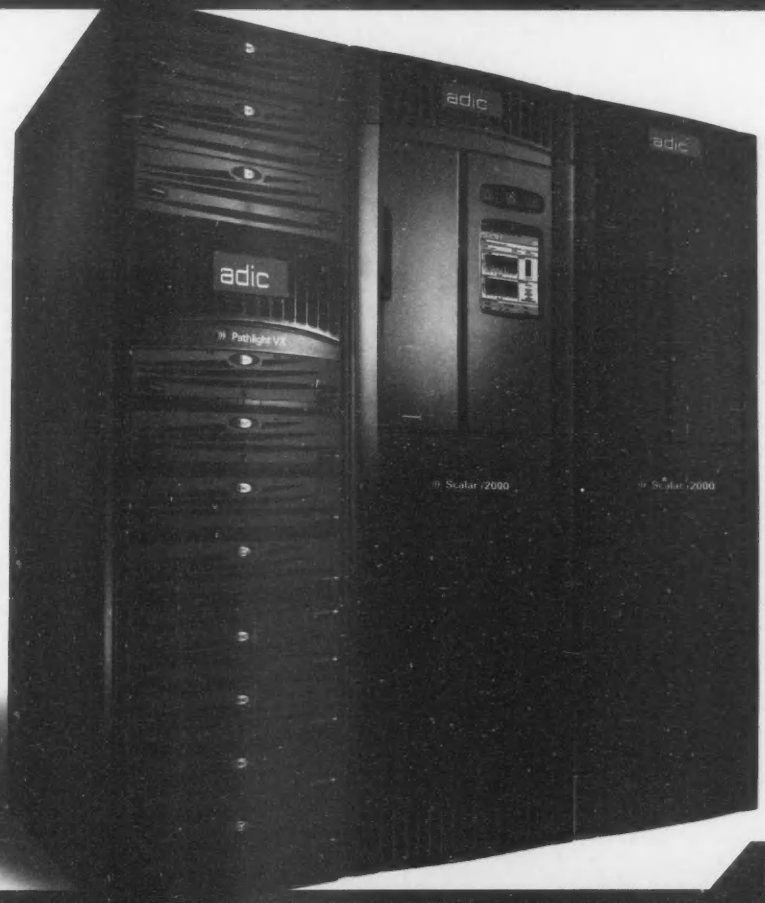
David Grant, data center manager at Mitel Networks Corp., a communications services provider in Ottawa, said that anyone who has worked in a mainframe environment understands a shared-services concept. But if a user has been running one application per server, "you come to feel there is a little bit of a loss of control and management in collapsing [various servers] into one physical box," he said. "You feel like you're losing something."

Among the services being added by HP are training workshops on virtualization technology. Such offerings are needed in some cases because of cultural resistance on the part of users, said Jonathan Eunice, an analyst at Illuminata Inc. in Nashua, N.H. Vendors "need to explain to people how to use [virtualization] to ease the transition," he said.

For its Intel-based ProLiant servers, HP is augmenting its support for VMware Inc.'s virtualization software with tools that make it easier for VMware to work with Microsoft Corp.'s rival Virtual Server technology.

The updated Global Workload Manager is shipping now for HP-UX and Linux, and the OpenVMS support is due to follow in December. The capacity adviser and virtualization manager also should be available by year's end, said van der Zweep. **56723**

THE BRAINS TO BACK IT UP.



PATHLIGHT VX
Disk-Based Backup

*Looking at disk-based backup but not sure how to make it happen? Get the smarter disk backup solution—Pathlight® VX, from ADIC, the leading provider of tape libraries for open-systems backup.**

Smarter disk-based backup. Pathlight VX is the scalable backup and restore solution that increases the capacity and reduces the cost of disk backup by integrating disk and tape in a single, unified system. Disk gives you twice the backup performance of conventional libraries—and even faster restore. Tape delivers scalability, value, secure retention, and flexible disaster recovery. You get the best of both technologies in a single solution that slips right into your existing backup system.

Clear investment protection. With Pathlight VX, you can boost your backup and restore whether you need a system for 3.8 TB or 3,000 TB—and pay a lot less for it. You can even use your own tape library as part of the system—tape storage can be supplied by one of ADIC's intelligent Scalar® libraries, or by your legacy StorageTek L-Series™ system.

Room to grow, smarts to save. Pathlight VX delivers all the performance of disk and the fault tolerance of RAID, but it also scales to meet enterprise capacity demands and grows easily with your data—and it can cut your costs in half or more compared to conventional products.

*Market share from Gartner Dataquest, Tape Automation Systems Market Shares, 2003, F. Yale, April 2004

Visit ***www.adic.com/pvx*** to get your free GlassHouse white paper
by W. Curtis Preston, *Evaluating Disk-Based Backup Solutions.*

adic
Intelligent Storage™

Copyright 2005 Advanced Digital Information Corporation (ADIC), Redmond, WA, USA. All rights reserved. Created in USA.

GLOBAL DISPATCHES

An International IT News Digest

Munich Government Delays Linux Rollout

MUNICH

MUNICIPAL OFFICIALS have acknowledged that the city of Munich failed to meet a mid-2005 deadline for migrating 14,000 PCs running Microsoft Corp.'s Windows operating system and Office software suite to Linux and OpenOffice.org.

The initial deadline, first set three years ago, has been extended to the middle of next year because of delays related to potential patent issues and a drawn-out bidding process, city officials said.

"A couple of developments have happened since we started this process," said Florian Schiessl, a spokesman for the Linux project team. He said the debate over whether Linux includes patented software came "in the middle of our public-tender process," forcing the city to call a temporary halt to the project.

A panel of legal experts downplayed the patent risks. But then the bidding process took longer than expected to complete because the competing offers "were very different and impossible to compare," Schiessl said.

In April, Munich officials finally chose SoftCon AG and Gonicus GmbH to install the open-source software. Schiessl said the city recently decided to extend the project's pilot phase by another six months.

■ JOHN BLAU, IDG NEWS SERVICE

GLOBAL FACT

10.8%

Projected growth rate for the IT services market in Croatia this year.

Source: IDC, Framingham, Mass.

Philips Hands Over Its Display Business to TPV

HONG KONG

TPV TECHNOLOGY Ltd. has taken over production of computer displays and entry-level flat-screen televisions for Philips Electronics NV as part of a deal that gives Philips a minority stake in Hong Kong-based TPV.

Philips last week officially handed over the two businesses, which last year had revenue of 1.6 billion euros ($2 billion U.S.), in exchange for a 15% stake in the newly enlarged TPV plus convertible bonds. The Amsterdam-based electronics company said it will market TPV-made computer monitors under its own brand name.

Shane Tyau, TPV's finance director, estimated that the deal will increase his company's monitor shipments by about 3 million units this year, to a total of 29 million.

■ DAN NYSTEDT, IDG NEWS SERVICE

Multinational R&D Firms Look to Taiwan

TAIPEI

IN AN EFFORT to offset the loss of manufacturing jobs to China, Taiwan over the past two years has signed agreements with several multinational companies, mostly IT firms, to build 28 research and development centers on the island.

The list of companies includes Hewlett-Packard Co., Microsoft and Sony Corp., according to Taiwan officials. Ho Mei-Yueh, Taiwan's Minister of Economic Affairs, said at a press conference earlier this month that the effort to attract research operations was necessary because Taiwan has "lost the low-cost edge" it once had on manufacturing.

Ho estimated that the Taiwan government and industry will together spend about $10 billion on R&D next year — a record for the island. By comparison, combined R&D spending last year at IBM and Intel Corp. totaled about $10.5 billion (U.S.). To encourage local companies to spend more on R&D, the government has used legislation as well as incentives such as research grants and lower taxes for research centers. **56645**

■ DAN NYSTEDT, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

The Israel Defense Forces have completed a series of projects to evaluate the effectiveness of radio frequency identification technology in managing military assets, materiel and supplies. The projects, undertaken with Sunnyvale, Calif.-based Savi Technology Inc., are being assessed for deployment for military applications.

■ LINDA ROSENCRANCE

KTF Co. has selected Nortel Networks Corp. and LG Electronics Inc. to supply it with networking hardware that will run a new ultra-high-speed mobile broadband communications service in 17 South Korean cities, including Seoul. The Seoul-based mobile phone service provider plans to launch the initial phase of the service by December.

■ DAN NYSTEDT, IDG NEWS SERVICE

Intel Corp.'s venture capital arm has agreed to invest $16 million in Grisoft SRO, an antivirus software vendor in the Czech Republic. The proposed stake in Grisoft, which makes software called AVG, would be Intel's largest investment in Central and Eastern Europe. The Czech government must approve the deal.

■ TOM KRAZIT, IDG NEWS SERVICE

Speech Recognition Powers Utility's Customer Service

PG&E system boosts ratings, delivers rapid ROI

BY THOMAS HOFFMAN

Customized speech-recognition technology added to PG&E Corp.'s interactive voice response (IVR) system has helped the San Francisco-based utility pare customer support costs while improving customer satisfaction, said managers interviewed last week.

The parent of Pacific Gas and Electric Co. installed the customized speech-recognition system developed with ScanSoft Inc. and Nortel Networks Corp. last fall to help automate account identification and provide other customer self-service functionality, officials said.

The Windows server-based system has been integrated into the utility's Nortel IVR system, along with its customer information, outage management and field order scheduling systems, said Steve Phillips, manager of PG&E's contact center enhancement.

Drivers behind PG&E's adoption of speech-recognition technology included improving customer satisfaction and the utility's so-called technology take rates, Phillips said. The latter measures the percentage of customers whose needs were satisfied using the IVR system without speaking directly to a customer service representative, he said.



PHILLIPS says the $3 million system paid for itself in less than a year.

In addition, the speech-recognition system provides PG&E with the ability to start and stop self-service transactions that telephone-based touch-tone systems couldn't handle, he added.

Based on customer surveys, the speech-recognition system has already improved PG&E's customer satisfaction and technology take rates, said Kent Barnes, a senior project manager in PG&E's contact center enhancement group.

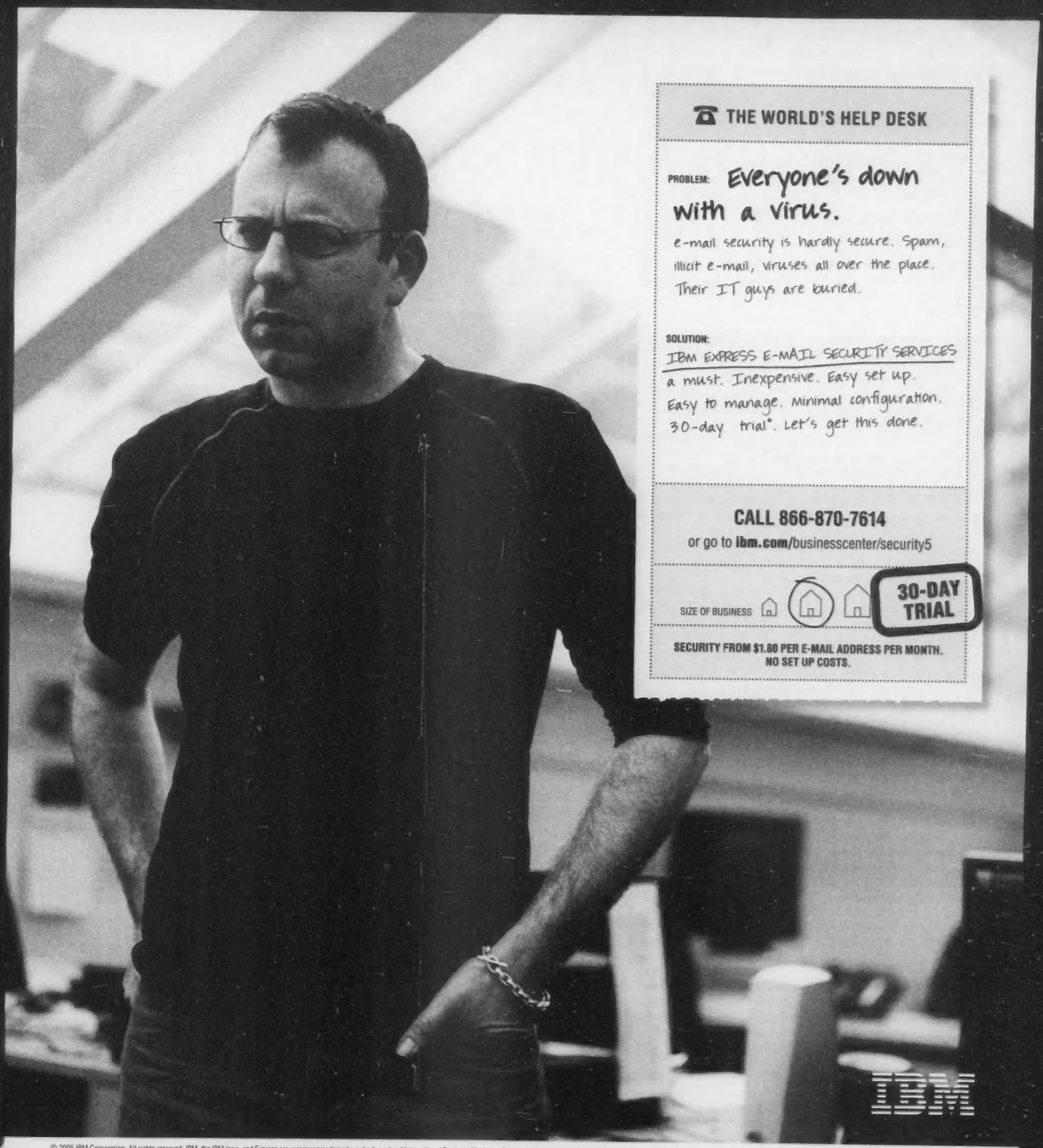
Before the installation of the new system, PG&E started conducting monthly surveys of about 560 IVR users.

In the first quarter of 2004, 61% of customers rated the IVR system "excellent" or "very good." The approval rate increased to 67% last summer, before dipping to 64% right after the system was installed, said Phillips. By June, satisfaction ratings had climbed to 69%, he added.

The technology enabled PG&E to improve its technology take rate from 33% to about 38%, said Phillips. Based on an average cost increase of $5 to $9 for a PG&E customer service rep to handle a call rather than the IVR system, Phillips said, the utility's $3 million investment in the speech software and associated hardware was paid off in less than a year.

Investments in customer self-service systems will remain one of the most popular areas for investment by power company IT operations, Gartner Inc. analyst Zarko Sumic said in a research note.

Utilities are "eager" to reduce customer support costs while improving the quality of service, Sumic said. "To meet higher complexity at the transformational level and increase ROI potential, leading energy companies will complement Web channels with advanced voice technologies" such as speech recognition and speech synthesis over the next two to four years, he said. **56707**



© 2005 IBM Corporation. All rights reserved. IBM, the IBM logo, and Express are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. Other company, product and service names may be trademarks or service marks of others. *Five days' prior written notice to IBM is required in order to cancel the Services during the 30-day risk free period.

BRIEFS

IBM Adds Version Of Notes/Domino

IBM has taken the wraps off its Notes/Domino 7 collaboration application and development platform. The new version includes interface tweaks and changes to the server software that officials said can cut overhead costs by making more efficient use of hardware. The version is also a step toward blending the Notes/Domino architecture with IBM's new Java-based Workplace platform.

Hester Replaces Weber as AMD CTO

Advanced Micro Devices Inc. named Newisys Inc. founder Phil Hester as chief technology officer, replacing Fred Weber. Weber, who led AMD's Opteron and Athlon 64 development teams, left the post to pursue other interests. Hester, who spent 23 years at IBM, will report to Dirk Meyer, president and chief operating officer of AMD's processor business.

Zimbra Unveils Alternative to Notes

Zimbra Inc., the open-source start-up that lured Scott Dietzen away from the CTO post at BEA Systems Inc., has released a beta version of its enterprise collaboration software. The company bills the software as an open-source alternative to enterprise collaboration products like Lotus Notes and Exchange Server.

HP Hires Another Palm Exec for Unit

Hewlett-Packard Co. has hired a second former Palm Inc. executive for its Personal Systems Group. Satjiv Chahil has joined HP as senior vice president of marketing for the division. He had been adviser to Palm's chairman, a board member of PalmSource Inc. and chairman of Palm spin-off Mobile Digital Media Inc. In June, HP named former Palm CEO Todd Bradley to head the group.

Siebel Adds Notes Integration, Branding to Hosted CRM Tool

Hopes to gain ground on Salesforce.com with new CRM OnDemand features

BY MARC L. SONGINI

SIEBEL SYSTEMS INC. this week will bring out a new version of its hosted CRM software that adds integration with IBM's Lotus Notes collaboration software and lets users offer the system under their own brand names.

The San Mateo, Calif.-based software vendor is expected to unveil Siebel CRM OnDemand Release 9 today in the midst of its effort to gain momentum against hosted CRM sales leader Salesforce.com Inc.

Salesforce.com is expected to preview the next release of its hosted system this week at its Dreamforce user conference in San Francisco.

NEW PRODUCT

OnDemand 9

- A branding feature lets users put their own logo on the software.
- Interactive voice response is integrated with third-party systems.
- Contact center analytics are enhanced.

Siebel will likely face further competition in the coming months: Microsoft Corp. last week hinted that it plans to enter the hosted CRM fray.

Hosted CRM sales grew 105% in 2004 to $403 million, up from $196 million a year earlier, according to a note published last month by AMR Research Inc. in Boston.

At the same time, AMR said, SAP AG's $1.6 billion in overall revenue from CRM sales surpassed Siebel's in 2004 by $300 million.

Keith Raffel, Siebel group vice president of products for OnDemand, said the Notes integration in OnDemand 9 will let users do things like slip customer e-mails directly into the Siebel application to help speed up quote generation. The company already supports Microsoft Outlook.

More Enhancements

The new version also offers integration between Siebel's packaged CRM software and the hosted offering's Contact OnDemand component, Raffel said.

The ability to place a company logo on the software is "strong stuff" for branding purposes, said Jim Fetherman, chief operating officer at Continental Dispatch LLC.

The Lafayette, La.-based company uses Siebel Contact OnDemand to provide roadside dispatching services to customers. Fetherman said he will use the branding feature in the new version as Continental diversifies its business.

Bruce Daley, an independent analyst in Denver, said that while Siebel's hosted CRM sales totals won't easily reach Salesforce.com's numbers, "the fact that the company is doing the difficult work of constantly releasing new product should serve it well when competing with vendors like SAP or Microsoft, which seem to be just toying with the on-demand model." **56716**

Cognos Joins Five Tools, Adds Support for OLAP

Business intelligence product works with relational, multidimensional data sources

BY HEATHER HAVENSTEIN

Cognos Inc. this week will unveil business intelligence software that integrates five products and is designed to work against any data source and simplify deployment.

The new Cognos 8 includes query and reporting tools, dashboards, and analysis and event management capabilities that can be accessed via a single Web-based interface, according to company officials.

The tool also adds the ability to report against multidimensional online analytical processing (OLAP) data, said Leah MacMillan, vice president of product marketing.

The tool integrates Cognos' ReportNet, Metrics Manager, PowerPlay, DecisionStream and NoticeCast products.

Cullen/Frost Bankers Inc. in San Antonio plans to have Cognos 8 — which the company tested earlier this year — in production by the first quarter of 2006, said Louis Barton, director of data warehousing.

OLAP Advantage

Cullen/Frost now runs earlier versions of the Cognos reporting, scorecarding and OLAP tools for various types of financial reporting. The Web-based footprint in the new version will let 500 of the company's users run the software, compared with 300 using the older tools.

Barton said the support for multidimensional data "is really big for us because we have a lot of our senior management looking at the business through the OLAP viewpoint. The next natural thing to do is to create a report from what you are looking at," which will help the decision-making process.

NEW PRODUCT

Cognos 8

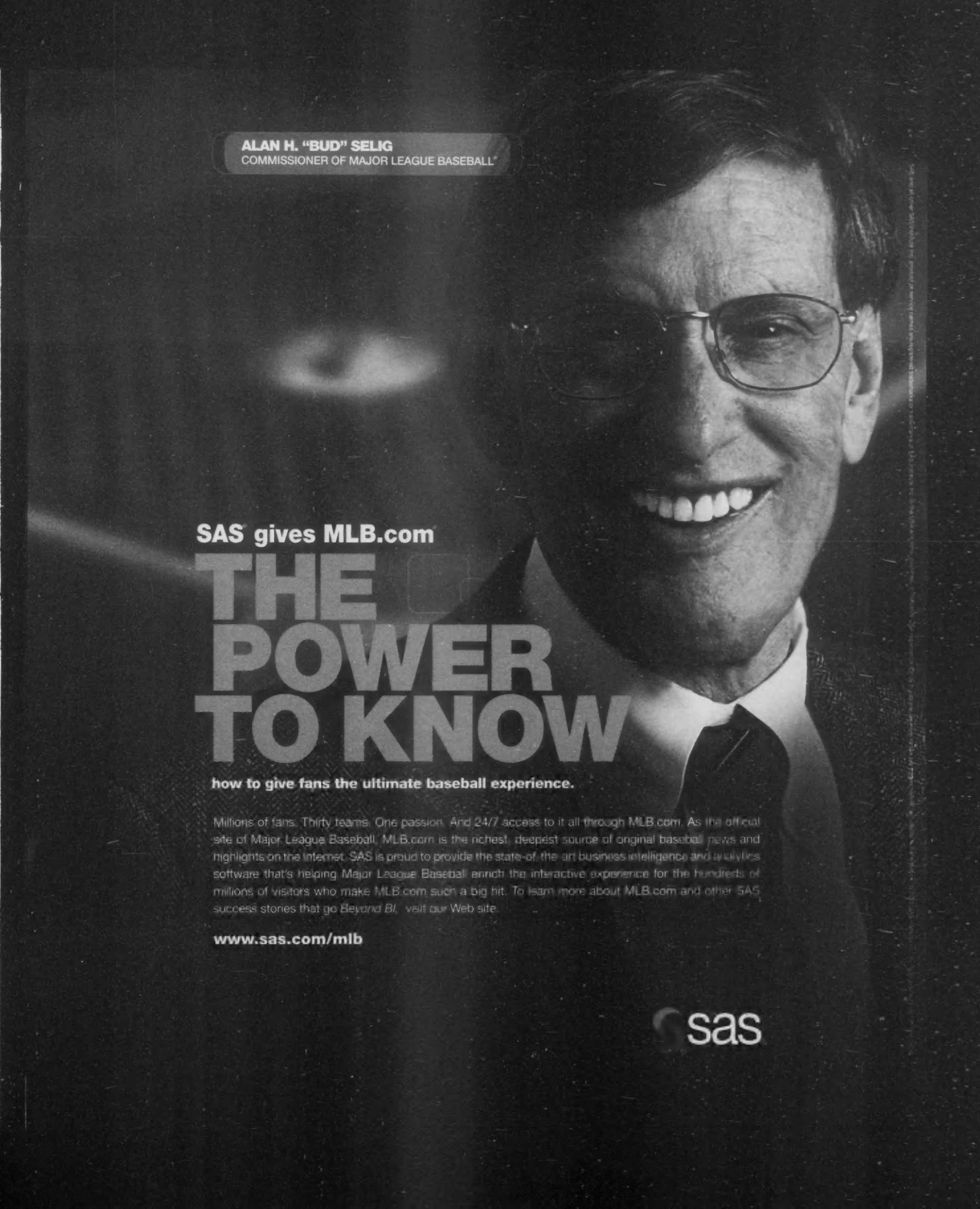
- Features include querying, reporting, dashboards, analysis and event management capabilities.
- Dashboards are an extension to reporting; users don't need a separate tool to create dashboards.
- The Web services foundation allows third-party vendors to easily add functions.
- An event management feature allows users to be alerted to the status of an event and can trigger a process based on an event, like acquiring additional parts when inventory dips.

Regent Medical Americas LLC, a medical supply company in Norcross, Ga., plans to upgrade to Cognos 8 after an upcoming company merger, said BI manager Susan Dean. Regent's parent, investment firm Apax Partners Inc., has acquired Göteborg, Sweden-based Molnlycke Health Care AB, which will be merged with Regent, Dean said.

She also said the support for reporting against OLAP data is the biggest advantage of Cognos 8. More than 200 Regent users have been using the Cognos ReportNet tool since December for sales and financial reporting.

Because Cognos 8 blends OLAP and relational data sources, it can help companies move BI to more employees, said Eric Rogge, an analyst at Ventana Research Inc. in San Mateo, Calif.

"The primary engine of growth for BI is operational BI — deploying BI information to front-line workers in applications," he said. **56709**


ALAN H. "BUD" SELIG
COMMISSIONER OF MAJOR LEAGUE BASEBALL®
SAS® gives MLB.com
THE POWER TO KNOW
how to give fans the ultimate baseball experience.
Millions of fans. Thirty teams. One passion. And 24/7 access to it all through MLB.com. As the official site of Major League Baseball, MLB.com is the richest, deepest source of original baseball news and highlights on the Internet. SAS is proud to provide the state-of-the-art business intelligence and analytics software that's helping Major League Baseball enrich the interactive experience for the hundreds of millions of visitors who make MLB.com such a big hit. To learn more about MLB.com and other SAS success stories that go Beyond BI, visit our Web site.
www.sas.com/mlb
sas

CA Offers Patented Tech to Open-Source Developers

Follows a similar move in January by IBM to release proprietary software

BY TODD R. WEISS

COMPUTER Associates International Inc. last week announced plans to make proprietary technologies covered under 14 CA patents available to individuals and groups working on open-source projects.

The action by the Islandia, N.Y.-based software vendor comes eight months after IBM announced a similar move, opening 500 of its patents to the open-source community last January [QuickLink 51862].

"Part of our motivation is to be able to say that we think the next generation of innovation is going to come from open-source, and we want the next generation of developers to be able to innovate," said Mark Barrenechea, executive vice president of technology strategy and chief technology architect at CA.

Public Relations Ploy?

Analysts had mixed reactions to the move.

Maria Winslow, an independent open-source software analyst in Chapel Hill, N.C., said the announcement is likely "more of a PR move than anything else."

"I'd be interested in how valuable [CA] actually believes those patents to be," Winslow said. "Without knowing those kinds of specifics, it sounds more like PR to me."

On the other hand, Stuart Cohen, CEO of Open Source Development Labs Inc., a global consortium in Beaverton, Ore., that encourages Linux adoption, lauded CA's move.

In a statement, Cohen said his organization will work with CA and other companies that make patented software available to create a vehicle to administer such technologies.

Barrenechea said the effort will give developers freer rein to explore software technologies.

"You get concerned around areas that may have strong patents in place" that can hinder development, he added.

The technologies covered by the 14 patents include application development and modeling tools, business intelligence and analytics software, systems and storage management, and network management and security tools. The affected patents also include their counterparts that have been issued in other countries.

To qualify for the CA program, licenses of products using specified CA intellectual property must be certified by the Open Source Initiative, according to the company.

Meanwhile, CA last week also said it has reached a long-term patent agreement with IBM, creating an exchange of license rights between the companies.

CA and IBM said they will work together to encourage other vendors to create so-called patent commons, in which patents are pledged to be available royalty-free to further innovation in areas of broad interest to developers and users of IT. **56676**

MORE COVERAGE ONLINE

For more about Linux and open-source technologies, visit our Web site:

QuickLink s1000
www.computerworld.com

Novell Exec Says Linux Growing in Data Center, Gaining in Workgroups

Most Open Enterprise Server users opting for Linux rather than NetWare

BY CAROL SLIWA
WALTHAM, MASS.

Novell Inc.'s $290 million in revenue in its most recent quarter fell short of expectations. **David Patrick**, *vice president and general manager of Novell's Linux, open-source platforms and services group, spoke with* Computerworld *about the company's prospects as it tries to shift its customer base from NetWare to the open-source Linux operating system.*



Software licensing revenue was down in the third quarter. What happened? More and more of our business is moving to subscription. [SUSE Linux Enterprise Server], Linux — most of these products are subscription-based, so the model for us is less license, more subscription.

Have you seen much traction with Linux on the desktop? It's now bigger than Macintosh. And it is growing. We see Linux on the desktop as the longer road. The shorter-term opportunities are in Web infrastructure, IT infrastructure, Web servers, database servers, database hosting and these types of things.

For those server workloads, most of the momentum has come from users moving from Unix. Will you need to get Windows Server users to make a switch in order to have a successful Linux business? When you look at the server market, Microsoft doesn't dominate the way they do on the desktop environment. They're the leader, but Linux and Unix also have significant penetration. If you look at the total market, it's not just about taking share from Windows, because there's significant share already by Linux and declining share by Unix. Windows is not a data center operating system.

But Microsoft has been pushing Windows as a data center operating system. Sure. That's their growth. They're moving into the data center. But that's not their roots. We're all moving up into the data center together.

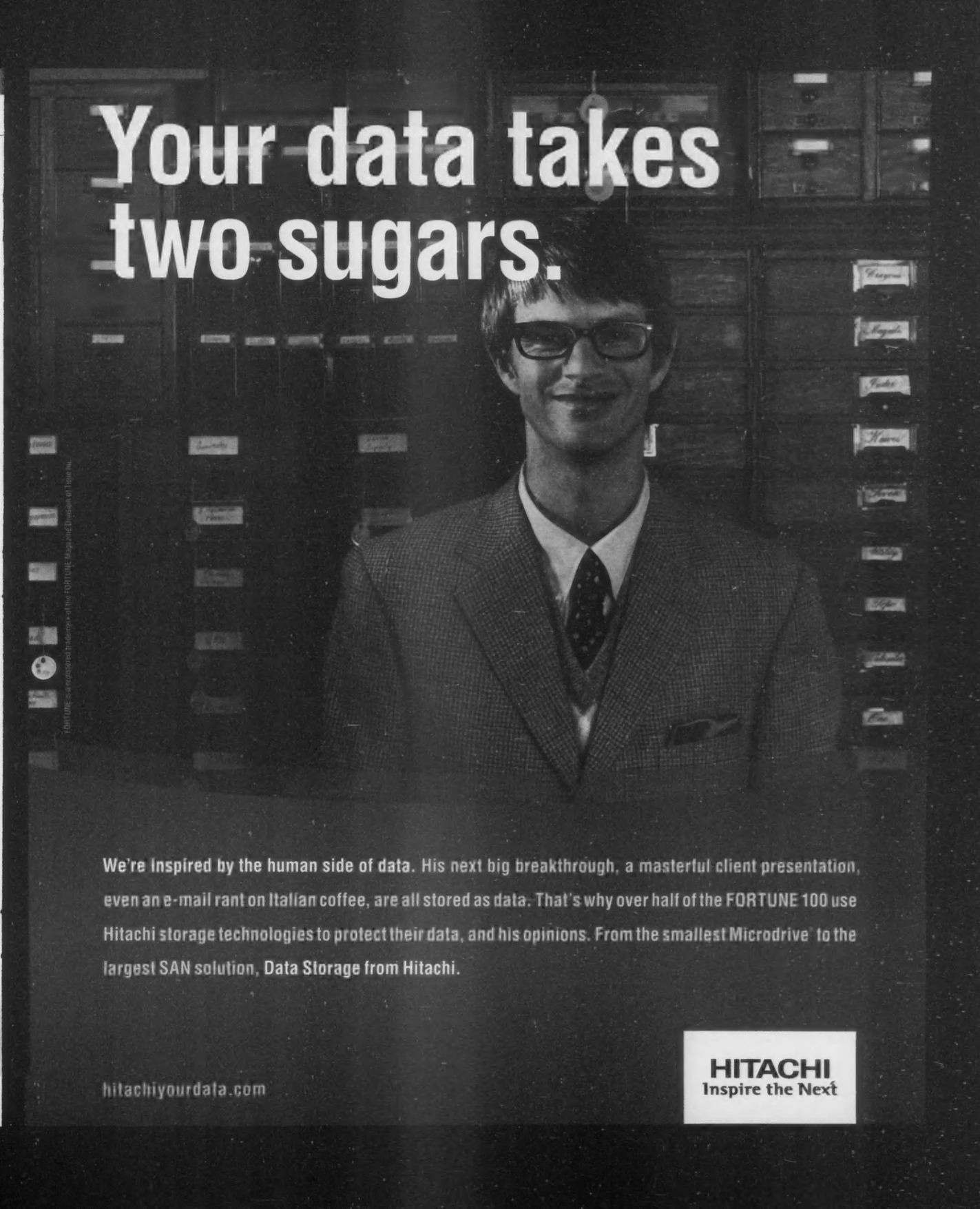
Will your main focus be the data center workload that was traditionally Unix-based? We're talking about some pretty big numbers here. Today, Linux- and Unix-related products around the data center, according to IDC, is somewhere near a $6 billion market. We certainly would like to have a piece of that market. We believe that if we effectively move in and handle data center workloads, then ultimately we will be able to have an anchor business there that will move to Linux.

You have to assume, with Microsoft talking about things like virtualization recently, that they see Linux has a significant opportunity to move into that market. And we're both going to be going after it.

Are you also going to try to get back some of Microsoft's stronghold in file-and-print, messaging, Web and application servers? Novell certainly has a target on the workgroup market. It's a market we've been in a long time with NetWare. Our first goal is to move our customer base from NetWare over to Linux, but then ultimately we would like to participate in a larger piece of the workgroup market, too. That's why we've announced projects like Hula, which is open-source collaboration running on Linux. We're fully building our print-and-file capabilities into Linux.

Is it realistic to expect to get back NetWare users who switched to Windows? The encouraging thing we're getting is the reasonably strong acceptance of Linux in our core customer base. Remember, we only shipped OES [Open Enterprise Server, which gives customers a choice of running Novell services on Linux or NetWare] in March. We saw our first full quarter of business this quarter at $31 million, and 65% said they were buying OES for Linux. As we're successful in moving them over, that builds market validation for our strategy that we want to then leverage for the customers. But our initial stages really have been focused on our customer base. You need success stories.

How do you expect to see the breakdown among your different areas of focus with Linux? We're focused on Linux in data center workloads, workgroup computing around OES and desktop. We think the opportunity in terms of percentage of market penetration is probably highest today in the data center workloads and application hosting and then moving to workgroup and then moving to the desktop over the long run. **56679**


Your data takes two sugars.
FORTUNE is a registered trademark of the FORTUNE Magazine Division of Time Inc.
We're inspired by the human side of data. His next big breakthrough, a masterful client presentation, even an e-mail rant on Italian coffee, are all stored as data. That's why over half of the FORTUNE 100 use Hitachi storage technologies to protect their data, and his opinions. From the smallest Microdrive™ to the largest SAN solution, Data Storage from Hitachi.
hitachiyourdata.com
HITACHI
Inspire the Next

Ameritrade COO Talks About Business-Technology Mix

BY LUCAS MEARIAN
NEW YORK

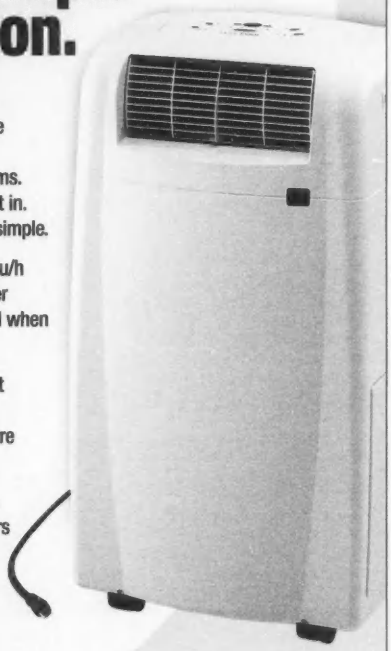
Asiff Hirji *last month was promoted to chief operating officer of Ameritrade Holding Corp. after serving three years as CIO at the online brokerage. Hirji discussed his new role overseeing business and IT operations and offered advice to other IT and business executives during a question-and-answer session at Gartner Inc.'s Financial Services Technology Summit here late last month.*

Overheated?

Plug In The Simple Solution.

MovinCool spot air conditioners are the answer to your overheating problems. Just roll it in. Plug it in. Turn it on. It's that simple.

- Up to 60,000 Btu/h of cooling power right where and when you need it
- Protects against data loss and equipment failure
- #1 in portable air conditioning for over 30 years
- The only portable air conditioner ETL-verified for performance



MOVINCOOL.

THE #1 PORTABLE SPOT COOLING SOLUTION

800-264-9573 or visit www.movincool.com

©2005 DENSO Sales California, Inc. MovinCool, SpotCool and Office Pro are registered trademarks of DENSO Corporation.

How do you see the role of the CIO moving more toward a business role? In financial services, the technology and the business is going to get more tightly tied together. I do see the evolution of the CIO being more oriented toward the business. I could imagine the head of a business division becoming the CIO. I'm still making that transition from CIO to COO.



How will you align Ameritrade's technology and business strategies? I have to believe that Ameritrade is a bit of an anomaly. We are a financial services firm, but we have more in common with the Amazons, eBays and Pricelines than we do with, say, Citibank or Fleet.

It's impossible for the technology strategy and business strategy at Ameritrade to be misaligned, because there's no such thing as a technology strategy here. We are a technology company and we have business strategy, ergo the technology supports that business strategy.

Will you be making changes at Ameritrade, which is seen by many as a niche online trading company rather than a financial services firm? We, like most companies, have gone through an evolution. We started life as a discount broker. As we grew to 6 million account relationships and $220 billion in assets, there's a whole plethora of [new] services that our clients are now asking us for. That's been the driving logic behind the TD Waterhouse transaction [QuickLink 55195].

It's also the driving force behind our client-centric strategy. We are a very low-cost, very highly profitable and very scalable financial services transaction processor. We can leverage the backbone we have. Our platform is the most scalable, most cost-effective trading platform on the planet. There's no difference if your trade originated on the phone, online or at a branch. It processes through that same platform.

Many organizations see IT as an inhibitor of change. How does a CIO or COO change that perception? I think a lot of that frustration probably has to do with [users saying], "I can't get IT to actually do this project on time. They're never on budget." I'm guessing that's where a lot of that frustration's coming from. We fix that primarily through governance. When we put the new structure together for Ameritrade, we said let's understand two things: [First], our industry is really dynamic. So if anybody knows in January what's happening in September, they must be God, because there's no one else on the planet who can figure that out.

Second, we're crap at estimating. If we're crap at estimating, I'd rather you estimate on something that's six to nine weeks out as opposed to six to nine months out. We have a very simple rule. Every single project we do, six to nine weeks is the max time it will take.

Most companies seem to focus on keeping the lights on versus delivering robust and reliable systems. Is Ameritrade any different? Back in my consultant days, the typical client would spend roughly 70% of the budget on maintenance and 30% on new stuff. For us, it's absolutely the inverse. That's a number I track very specifically. We manage to that.

Second, we look very hard [at spending] by area. Typical spending goes into things that do not differentiate. We try very hard to suck all money out of that and pour it back into the things that do differentiate. We believe the only sustainable competitive advantage is the quality of our own tool. Frankly, my job boils down to one thing: attract, retain and develop the best and brightest staff. You do that, [and] everything else takes care of itself.

What can the average IT operation do to increase its percentage of new development compared with maintenance? [If] your payment system is [built] on '60s Cobol, no one's going to throw that out. Maintaining that thing is really expensive, so there's no way on this planet that you're going to get to 70/30 on that.

But every new business or new initiative can be on open-source technologies with horizontally scalable, as opposed to vertically scalable, systems. [Such systems can be built by] people who are trained in Java and know what object-oriented code is and know what "SLA" stands for. When they build a system and manage a system, you will be at 70/30 in those parts of your world. There are companies in India or China who know stuff [like Cobol] cold. And they can run it cheaper than you can. **56675**

Symbol, Intermec Settle Most Patent Disputes Over RFID

BY STEPHEN LAWSON

Symbol Technologies Inc. and Intermec Technologies Corp. have agreed to settle much of a yearlong dispute over intellectual property for radio frequency identification technology, the companies announced last week.

The companies, both of which make products that use RFID, also said that they intend to suspend any remaining litigation as they work to settle unresolved issues.

Everett, Wash.-based Intermec last year sued Matrics Inc. [QuickLink 47465]. Since then, Matrics has been acquired by Symbol, which Intermec alleged infringed on Intermec RFID patents.

Meanwhile, Symbol in March sued Intermec for patent infringement and at the same time pulled out of an agreement to supply Intermec with laser-scan engines.

Following those moves by Symbol, Intermec filed another patent suit against Holtsville, N.Y.-based Symbol.

Licensing Deal

Under the settlement, each vendor has agreed to license technology from the other.

Symbol has also agreed to join Intermec's Rapid Start RFID licensing program, which provides access to various Intermec technologies, including RFID tags and fixed and portable readers.

Intermec will gain access to Symbol intellectual property through the cross-licensing provisions of Rapid Start, according to a statement by the companies.

Intermec will also ask for dismissal of its original suit against Matrics in U.S. District Court in Wilmington, Del., and of a complaint against Symbol that it filed with the International Trade Commission in Washington, according to the filing.

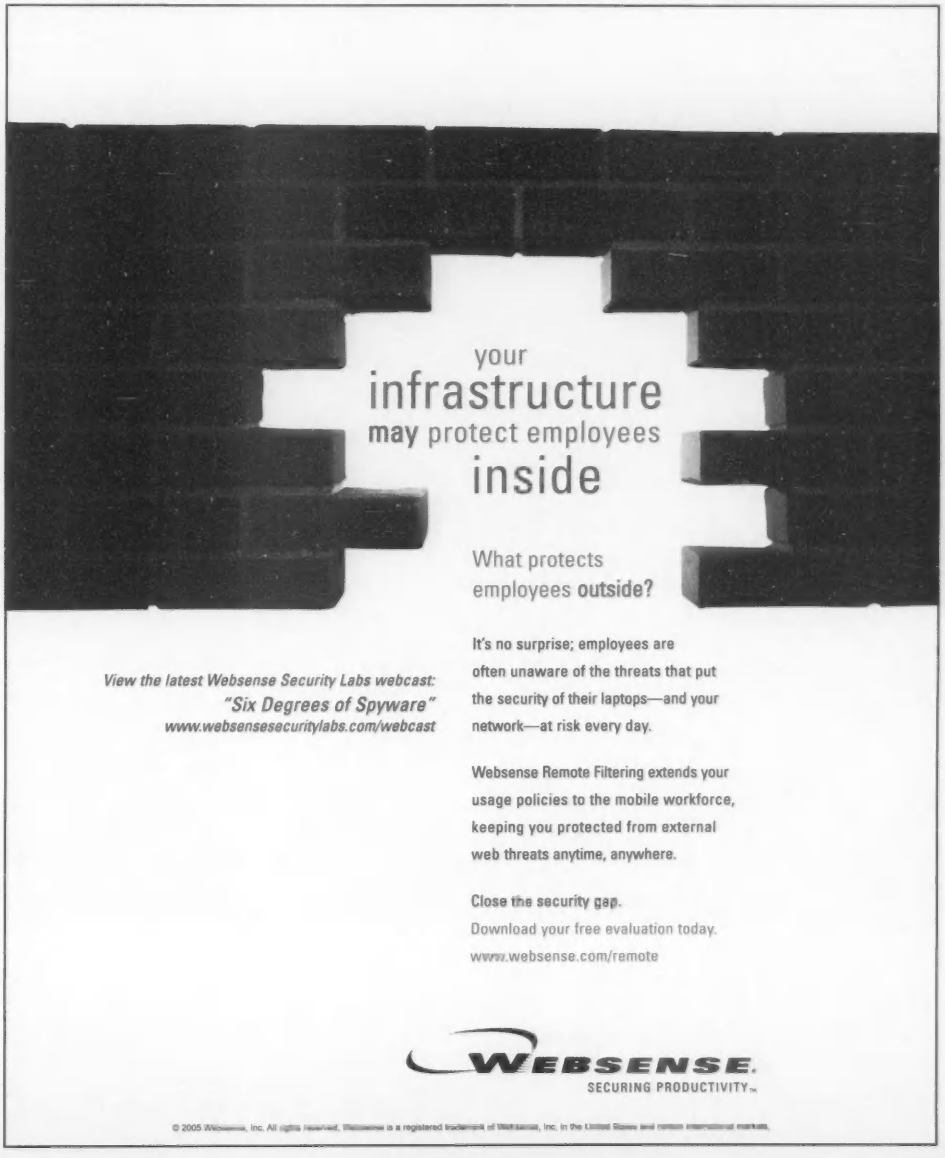
As part of the agreement, Symbol said it's again willing to sell scan engines to Intermec, though no orders have yet been placed.

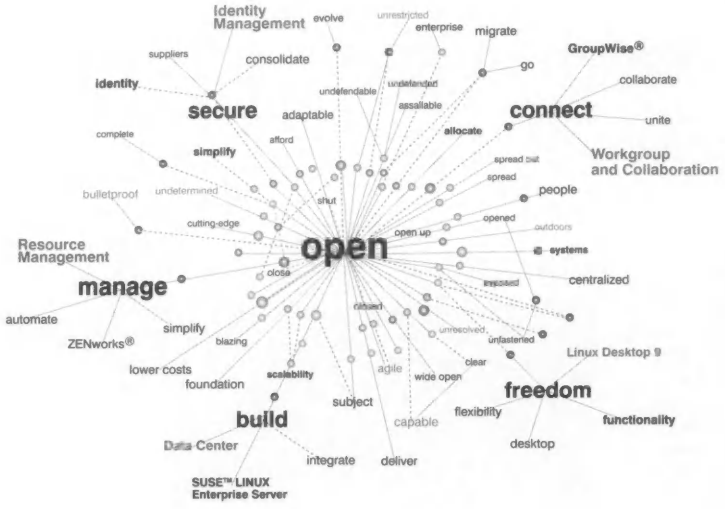
The statement from Symbol and Intermec said that the companies have put all pending and anticipated legal actions on hold for 90 days while they try to work out any unresolved intellectual property disputes.

"We prefer to negotiate rather than litigate," said Sal Ianuzzi, interim president and CEO of Symbol, in a conference call last week.

Financial terms of the settlement weren't disclosed. 56654

Lawson is a reporter for the IDG News Service.





Define Your Open Enterprise.

What does Open mean to you? Community? Security? Risk? Reward? Can it leverage legacy systems? Consolidate and simplify? Do you believe in its power and potential?

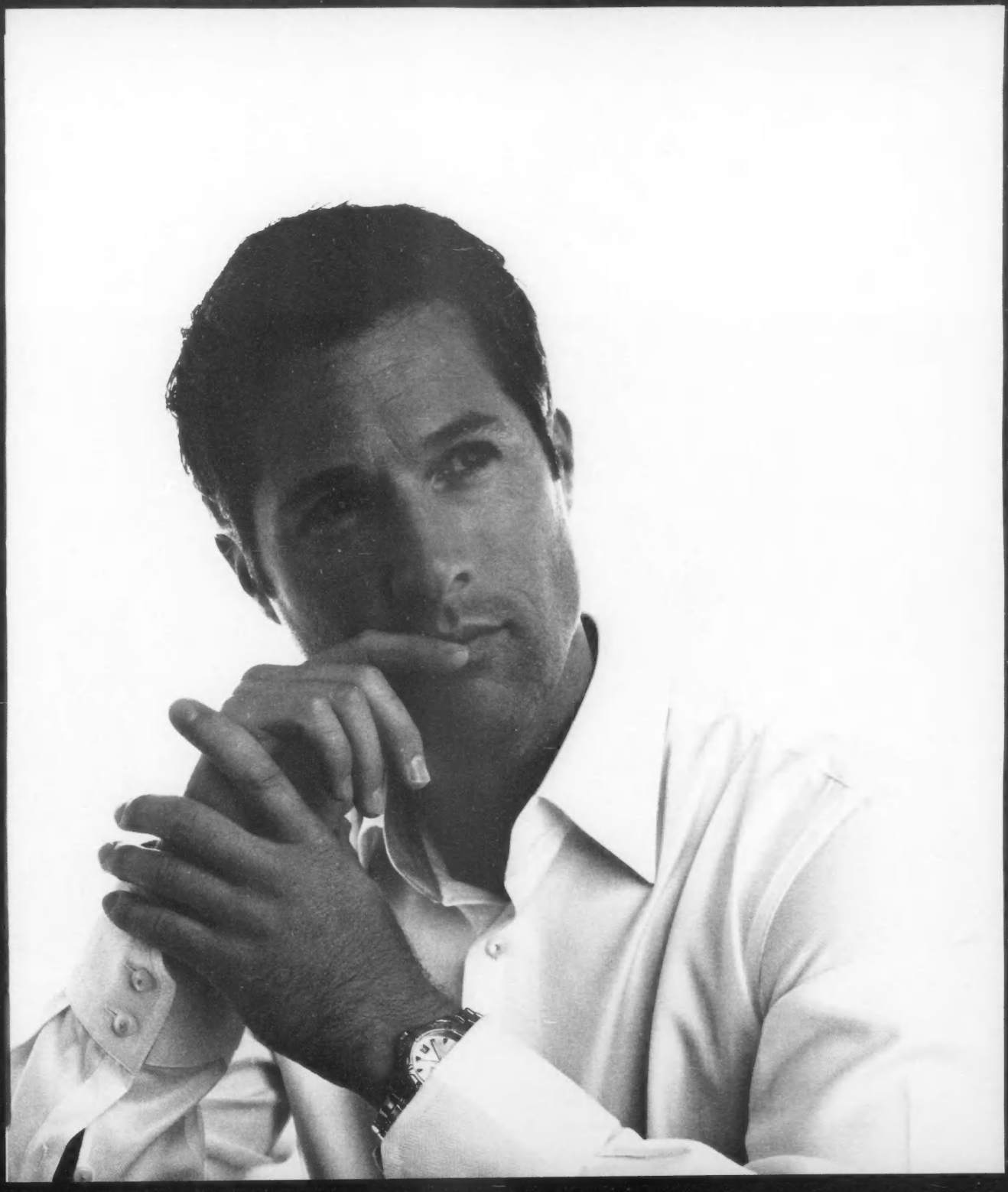
Introducing Novell software for the open enterprise — the only software that makes Open work for you. From desktop and data center to identity management, resource management and collaboration, our flexible combination of open source and commercial software delivers more than you ever imagined. The power to manage IT assets and effort automatically. Freedom from single vendor lock-in. Security that keeps the right information safe and the right people informed. And the ability to connect people to performance and business to possibilities. So you can build an open enterprise that makes sense for you — and your future. This is Novell software for the open enterprise. The Open you've wanted all along.

Novell.

This is your open enterprise.

www.novell.com

Copyright © 2005 Novell, Inc. All Rights Reserved. Novell, the Novell logo, ZENworks and GroupWise are registered trademarks; SUSE is a trademark of Novell, Inc. in the United States and other countries. All third-party trademarks are the property of their respective owners.



DON TENNANT

Why-Fi?

DISCLAIMER: I have no personal, professional or financial interest in Verizon Wireless. To my knowledge, I have no friends, acquaintances or relatives who are employed by Verizon. I have no opinion about the merit of Verizon's services compared to those of its competitors. No one at Verizon or any of its representative agencies is aware that I'm writing anything about the company or its services.



DON TENNANT is editor in chief of *Computerworld*. You can contact him at don_tennant@computerworld.com.

Whew. OK, with that out of the way perhaps I can say, without raising any suspicions of graft or collusion, that I'm a huge fan of Verizon's 3G broadband Internet access service. The reason? It's doing precisely what it's supposed to do. It's making my life easier.

As a frequent business traveler, I was, until recently, a slave to Wi-Fi. And it bugged me. Being dependent on Wi-Fi hot spots is lousy when you spend an inordinate amount of time in airports. Aside from going through what, more often than not, was a hassle with the setup, there was the cost annoyance. I could really identify with the issues raised in a story Linda Rosencrance wrote last month about a feud between Boston's Logan Airport and Continental Airlines over charging for Wi-Fi access [QuickLink 56048]. As that story pointed out, it's ridiculous to have to pay a daily rate for Internet access at airports. "How often do I spend a full day at the airport?" analyst Jack Gold noted. "I'm there for 30 minutes before my flight or between connections." And he nailed the consequence: If airport authorities persist with this "extortion," users will find alternatives, like cellular broadband services.

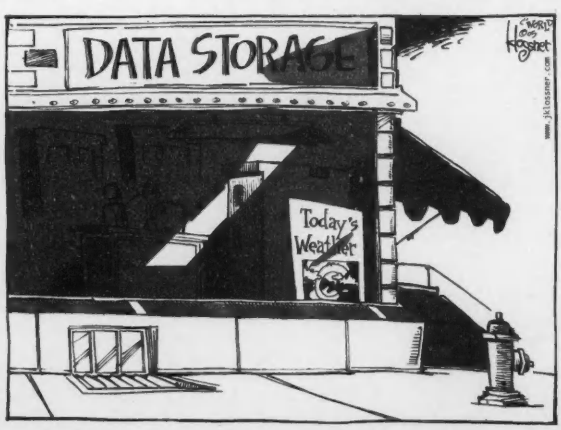
I was fortunate in that my company provided that very option. Now I carry a PC card that enables me to connect to Verizon's (not so cleverly named) BroadbandAccess network, and life is sweet. Sitting in a plane on the tarmac at O'Hare for two hours due to a weather delay a couple weeks ago was made bearable by the fact that I was as productive as I would have been if I'd been sitting in my office.

Of course, that sort of productivity gain doesn't come cheap. Verizon recently lowered the monthly fee for unlimited access from $79.99 to $59.99, but don't let that fool you. After tacking on the various taxes, government surcharges and other fees, we're paying $71 and change per person. Matt Smith, *Computerworld*'s CFO, is as affable and accommodating as they come, but he's skeptical of the value of broadband access. He's convinced that a BlackBerry is sufficient for the needs of most of us, and he's probably right. On the other hand, when you pay 10 bucks a pop at airports for Wi-Fi access and another 10 bucks a night at hotels for high-speed connectivity, if you travel a lot that $71 can begin to look pretty good.

In any case, at least there's now a viable alternative to Wi-Fi for anyone who can justify the cost. And it's clear that an alternative was needed. A recent Gartner study found that only 25% of U.S. business travelers use Wi-Fi hot spots [QuickLink 56648]. The need for more flexible billing and payment methods was one factor cited by the report's author, since business travelers often can't count on getting reimbursed for hot spot charges when Wi-Fi isn't included in their companies' contracts with telecommunications providers.

With a broadband access plan, that's not an issue. Neither is the annoyance. Increasingly, that will put a big "Why?" in Wi-Fi. **56678**

Don Tennant



DAVID MOSCHELLA

Three Questions On Google

MORE THAN the recovered Nasdaq, and more than the recent pickup in corporate IT spending, the buzz and enthusiasm over all things Google is the best evidence yet that the trauma of the postbubble period is officially behind us and it's OK to believe in technology, innovation and the future once again. What a relief to be talking about Sergey Brin and Larry Page and not Ken Lay and Bernie Ebbers.

Of course, you can't be as successful as Google and not generate controversy. Although the company has, among many other things, significantly improved Web searches, greatly accelerated the online advertising industry, revitalized the mapping and local search businesses, and helped bring blogging to the mainstream, Google is not without its critics and skeptics. As the company begins to launch an ambitious range of new messaging, information and location-based services, there have been three main lines of debate.



DAVID MOSCHELLA is global research director at the Leading Edge Forum, a Computer Sciences Corp. company. Contact him at dmoschella@earthlink.net.

1. Is Google the new Microsoft? This question is rarely posed as a compliment, and many fear that Google will prey upon smaller competitors, buy up all the best talent and eventually start bullying people and deploying proprietary technologies. But without minimizing the strength of Google's current position, these fears are largely unwarranted. Microsoft's 24 years of operating systems dominance stemmed from our long pre-Web history of proprietary vendor technologies, and the company still enjoys high levels of customer lock-in. You and I could switch search engines tomorrow for essentially zero cost, just as many of us have done in choosing Google over AltaVista, Yahoo and others.

While it's hard to feel sorry for the world's richest man, you can understand Bill Gates' frustration. After all, he has spent years championing the

TAME THE DATA EXPLOSION



THE DATA EXPLOSION IS YOUR BIGGEST CHALLENGE OR GREATEST OPPORTUNITY — THE DECISION IS YOURS

SYBASE®

intel. hp invent

POWERING DATA ANALYTICS

CIO Custom Publishing

IN FINANCIAL SERVICES, it's the volume and speed of stock trades.

In telecommunications, it's the competitive frenzy to serve ever more customers with ever more services.

In health care administration, the challenge is not just to process payments, but also to prevent fraud and maintain strict compliance with new government regulations.

All global enterprises today live in the fallout of the "data explosion." They've invested millions to gather and store potentially valuable data. But they are increasingly challenged to analyze and process this data quickly and turn it into a competitive advantage.

The "data explosion" itself isn't news—every business leader knows there are more data sources and complex data queries than ever before. And the stakes keep rising.

Consider the financial services industry, where billions of dollars are on the line and the decision-making window keeps shrinking. "In the past, when traders competed for a trade, a few seconds meant the difference between winning and losing," says Eric Doyle, global industry manager, financial services, at Intel. "Now, with the growth of programmed trading, seconds are an eternity—it's milliseconds that mean the difference in who wins and loses a trade."

THE INFORMATION CHALLENGE

"Customers today don't have the challenge of having enough data," says Christopher Buss, director of business intelligence at HP. "Being able to identify and process the right amount of data is really what they're struggling with."

Among the issues:

Sheer numbers. Informational queries overwhelm IT staff and systems. The longer those queries take, the more they threaten the operational performance of the organization and compromise service level agreements (SLAs).

Regulatory compliance. For industries like financial services and health care, the need to meet myriad regulatory requirements—such as storing more data for longer periods of time—overwhelms systems and staffs, diverting time and energy from projects that build the business.

Cost. More complex queries mean more investments in storage hardware, reporting systems and staff training. "You want to have a balance between lowering costs and making data as speedy and available as you possibly can," says Kathleen Schaub, vice president of product marketing at Sybase.

What Is Your Greatest Data Explosion Pain Point?

Too much data
Too many regulatory issues
Existing systems too unwieldy and expensive
Current analytic tools too slow

Post your answer to this quick poll at
www.computerworld.com/dataexplosion

THE BUSINESS OPPORTUNITIES

Business and technology leaders have long tried to derive value from business data, but traditional methods fall short. Relational database management systems (RDBMSs), for example, don't adequately support the sophisticated reporting and analytics necessary for quick decision making. Data warehouses are costly in terms of time, money and resources, and traditional reporting systems can be inefficient and expensive.

But it's not just an IT challenge. "This is much more than a data management issue for IT," says Intel's Doyle. "It's a line-of-business issue: understanding how to architect an infrastructure that can analyze these huge data sets and make smarter business decisions in ever shorter periods of time. The firms that make the best use of this market data have the competitive advantage."

Increasingly, smart business leaders are turning to a new generation of data analytics solutions to do just that.

Collaboration among HP, Intel and Sybase drives integrated reporting solutions that enable the analysis and reporting of business data with unprecedented speed and cost-efficiency. Sybase IQ, running on 64-bit Intel® Itanium® 2 processor-based HP servers, can dramatically accelerate time-to-information while reducing the cost and complexity of data management.

The Sybase IQ platform running on Itanium 2-based HP servers gives global businesses the means to capitalize on the data explosion through:

Standardization. Because this innovative data analytics solution is built with a standards-based relational design and easily integrates with existing systems, it overcomes the complexity that strains many IT departments.

Speed. Using a column-based structure and running on 64-bit Itanium 2-based HP servers, Sybase IQ delivers queries up to 100 times faster than an RDBMS.[1]

Compliance. By providing a platform for more complete analysis and reporting along with easy access to historical data, Sybase IQ gives businesses tools to meet regulatory requirements.

Cost Reduction. By reducing analytics and storage costs while minimizing risk, the platform contributes to a healthy bottom line. Running on Itanium 2-based HP systems, the solution scales as user loads increase, enabling smarter, faster decisions with low cost of ownership. Sophisticated compression algorithms reduce storage needs by 30 to 70 percent.[2]

In this post "data explosion" world, sophisticated data analytics are a necessity—not a luxury. Innovative, low-cost solutions that combine extraordinary speed, agility and openness make it easier than ever to gain value from the data you have today while driving faster time to money.

FOR MORE ON THE DATA EXPLOSION

Visit www.computerworld.com/dataexplosion for white papers, news and analysis, and check out the interactive webcast featuring experts from Sybase, Intel and HP in an engaging discussion of the business imperative and technology tools helping global enterprises turn the data explosion challenge into a new opportunity to grow their business.

[1]Source: White paper, "*Sybase IQ—Improving the Economics of Business Reporting*", www.sybase.com/content/1012404/L02555_IQReporting_WEB.pdf
[2]Source: "*Sybase IQ*", an evaluation by Bloor Research, www.sybase.com/detail?id=1035804

ACTION ITEMS

Containing the Data Explosion

New strategic approaches help the most competitive businesses turn the data explosion to an advantage, without massive IT investments. How? Here's some practical advice:

Assess Your Needs. According to Gartner, businesses today manage at least 30 times more data than they did in 1999.[1] More users are asking for more queries, and those queries are becoming more complex. Start by determining how much data you need to store, refresh and make available for ever more sophisticated queries. How long must it be stored? How much data will you refresh, and at what intervals? How many queries must you support?

Understand Current Limits. Traditional RDBMSs may not provide the reporting and analytics that high volumes of more demanding queries require. Assess current solutions and see where they're falling short.

Explore New Solutions. A new generation of data analytics solutions makes query processing faster, cheaper, easier and more scalable than many current solutions. Explore Sybase IQ, running on Intel® Itanium® 2 processor-based HP servers, to contain server and storage sprawl and get the data analytics your business needs to survive and thrive.

Leverage Resources. Visit **www.computerworld.com/dataexplosion** for white papers and case studies that will offer other tactical approaches to tackling the data explosion.

goal of bringing "information to your fingertips." Yet despite Microsoft's legions of highly paid R&D gurus, a couple of graduate students have become rivals by suddenly making Gates' dream a reality. Nevertheless, Microsoft remains a relentless business machine. Because Google is the most innovative IT company we have seen in years, this increasingly high-stakes competition should be fun to watch.

2. Is Google worth $75 billion? While Google is unlikely to become a Microsoft-like monopoly, that doesn't mean it can't sustain its astonishing stock-market valuation. The more apt business-model comparison is with eBay, another dot-com that has created phenomenal wealth by dominating a large and growing market. However, it is easy to imagine that new search technologies based upon personalization, community interaction, RSS, tagged pages, ontologies, mobility and eventually the Semantic Web might reshape the competitive playing field. If Google can navigate these shifts and hold its current position, it will have earned its fortunes.

3. Is Google Big Brother? Concerns have been expressed about the amount of sensitive personal information one can now obtain on the Web. But Google didn't create or publish this information, and blaming the search engine is a bit like blaming the card catalog for what's in the library. As for the potential privacy risks of Gmail, Google Desktop, etc., if Google ever deploys these services in a way that clearly betrays consumer trust, it will pay a terrible price, and therefore it is likely to tread very carefully. Never forget that if you have a particular disease, religious belief, political conviction, financial concern or sexual inclination, the Internet provides the most private means for learning and communicating in human history. By far.

On balance, this is one very happy story. **56596**

MICHAEL GARTENBERG

Don't Give Up on Pen Computing

WHEN IT comes to futuristic concepts, few ideas have captured the imagination like pen-based computing. The idea of doing away with a cumbersome keyboard for navigating and entering information has long been a Holy Grail, but it has met with little success. Microsoft's Tablet PC operating system has failed to take the world by storm, and lots of platforms — from the Momenta PC to Pen Windows, and from the Newton to PalmPilots — have come and gone while failing to shift the masses from their keyboards. Even PDAs and smart phones have shifted from being poster children for pen-based platforms to adopting tiny keyboards for text entry.



MICHAEL GARTENBERG is vice president and research director for the Personal Technology & Access and Custom Research groups at JupiterResearch in New York. Contact him at mgartenberg2@optonline.net. His weblog and RSS feed are at *http://weblogs.jupiterresearch.com/analysts/gartenberg.*

Several factors have slowed or doomed pen-based platforms, but they can all be overcome.

First, handwriting recognition has never lived up to its hype, nor can it. From the outset, the notion of pen-based systems has been linked with the concept of handwriting recognition, which hasn't served the market well. It's really not the fault of the technology, though. As I've said before, if you can't read your own handwriting, then it isn't reasonable to expect a computer to be able to. The pinnacle of the handwriting-recognition disaster came shortly after the introduction of Apple's Newton, when the device and its handwriting software were ridiculed in the comic strip "Doonesbury." The concept never really recovered, although the Palm OS's Graffiti recognition software cleverly shifted the burden of error from the device to the user, a brilliant move that reset expectations. The key to overcoming the shortcomings of handwriting recognition is to emphasize the other aspects of a tablet user interface, such as electronic ink for note taking, and to use the pen and tablet mode for things like consuming and editing information.

Second, most hardware has been inadequate, even when the software was good enough. Pen computing loses much of its powerful allure when too many trade-offs are needed in order to gain the pen-based functions. This is precisely the problem that has plagued the current generation of tablet PCs.

Too often, users are forced to deal with shortcomings when it comes to weight (tablets should be light enough to use comfortably in tablet mode), battery life and keyboards. A good tablet PC has to be portable enough to deliver a good pen experience while not compromising on screen, keyboard or battery so that it can deliver a good notebook experience as well. Today, only a few computers provide this experience, led by the newest member of the ThinkPad family, the x41 tablet. While keeping the weight of the x41 to under 4 lb., Lenovo managed to include a high-capacity battery and retain the ThinkPad's legendary keyboard and screen. This, at last, is a computer that really overcomes the hardware shortcomings that have been inherent in pen-based computing.

Pen computing isn't dead, but it is stagnant. For small devices where browsing is more important than content creation, the pen is an ideal navigation tool. But when it comes to composing information like e-mail, thumb keyboards are proving superior, even in small devices.

The PC is a different story. Despite Microsoft's best efforts, tablet PCs haven't really caught on. Still, with devices like the x41 coming to market, it's time for IT to take another look at the functionality of tablet PCs and see where it makes sense to deploy them. There are a lot of places where the pen is mightier than the keyboard. **56597**

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site: **www.computerworld.com/columns**

READERS' LETTERS

Dual MBAs Wanted

THE TOPIC in the article "2 for 1" [QuickLink 55183] fits right into my plan. I currently have a two-year degree in computer science, have been employed in the computer industry for 10 years and am working for a dual major in business management and business finance at a local university. It was good to read that businesses are looking for people with dual MBAs.

Anton C. Towne
Systems engineer/e-mail administrator, Marshall, Minn.

Execs Need Training

I AGREED with Michael Gartenberg's article "The High Cost of Not Training" [QuickLink 55371]. I'm sure the company that the CEO worked for had a fine training program. The problem is that the senior executives are not comfortable going to the same classes as the more computer-literate workforce.

When I was CIO at Ace Hardware, we solved this problem by asking for volunteers from IT to act as mentors to our officers. We limited the one-on-one training to two hours per month and specified that this was over and above their regular jobs. We found that we had many people who were experts in the PC and really liked the change of pace of doing some teaching. In addition, they got to meet some people in the company whom they didn't know.

This was not an original idea. I think I got it from an article about a program at GE. It has been very successful, motivating, fun and *free.*

Paul M. Ingevaldson
Retired, St. Charles, Ill.

GARTENBERG'S POINT, that slashes to training ultimately cost more in support and user frustration than they save, is 100% valid. However, the problem for the CEO who did not know how to use basic PC software is probably not training but his own attitude toward technology and his IT department.

Who hasn't worked for executives who are too good to participate in training and refuse to make time for IT to personally show them how to use new technology? When the new gadgets were being handed out, did the executive take 10 minutes to have IT provide a one-on-one overview? Has this executive ever reached out for help or identified his own training needs, let alone his organization's training needs?

Executives do not like to admit that they do not know everything and need help. It sounds like he'd rather complain to a complete stranger in an airport than be accountable for his own knowledge and ask for assistance within his organization.

Chris Williams
Houston

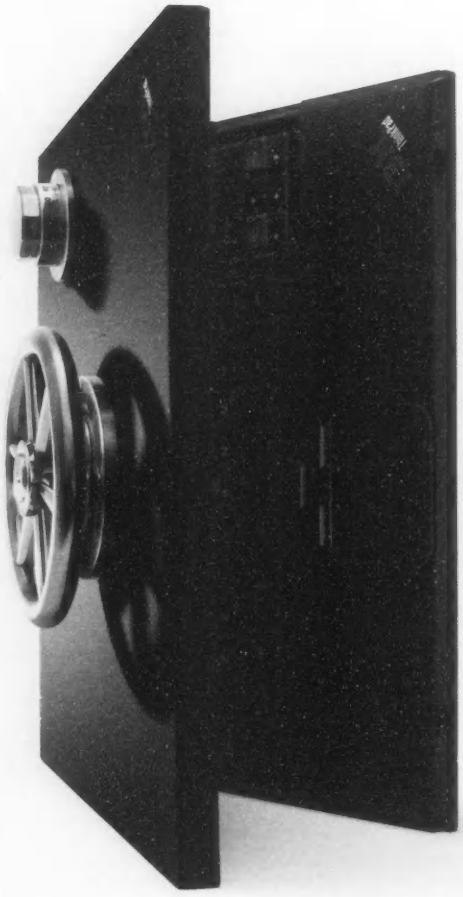
VERY, VERY TRUE. Our training department was decimated during a restructuring and layoff a couple of years ago. The very people we relied on to assist users and get our environment to the next level were let go.

Terry DellaVecchia
Technical development manager, Lyondell Chemical Co., Hunt Valley, Md.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Letters, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to **www.computerworld.com/letters**

ThinkPad recommends Windows® XP Professional.



LOSE THE WIRES.
AND, WHILE YOU'RE AT IT,
LOSE THE HACKERS.

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors. ***Pricing:** Prices do not include tax or shipping or recycling fees and are subject to change without notice. Reseller prices may vary. **Warranty:** For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept UF2A/B203. Lenovo makes no representation or warranty regarding third party products or services. **Footnotes: (1) Mobile Processors:** Power management reduces processor speed when in battery mode. **(2) Wireless:** based on IEEE 802.11a, 802.11b and 802.11g respectively. An adapter with 11a/b, 11b/g or 11a/b/g can communicate on either/any of these listed formats respectively; the actual connection will be based on the access point to which it connects. **(3) Included software:** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply. **(4) Memory:** For PCs without a separate video card, memory supports both system and video. Accessible system memory is up to 64MB less than the amount stated, depending on video mode. **(5) Hard drive:** GB = billion bytes. Accessible capacity is less; up to 4GB is service partition. **(7) Thinness:** may vary at certain points on the system. **(8) Travel Weight:** includes battery and optional travel bezel instead of standard optical drive in Ultrabay bay, if applicable; weight may vary due to vendor components, manufacturing process and options. **(9) Internet access required; not included. (10) Embedded Security Subsystem:** requires software download. **(11) Limited warranty:** Support unrelated to a warranty issue may



BEST WIRELESS DATA PROTECTION. ONLY ON A THINKPAD.

Hackers, beware. ThinkPad® notebooks with Intel® Centrino™ Mobile Technology allow users to work wirelessly with greater freedom. And their work will be protected because select ThinkPad notebooks offer an extra layer of data protection — a vault-like combination of a built-in security chip, data encryption software and an Integrated Fingerprint Reader. And we're the only ones to offer wireless PCs with this level of security as a standard feature. So, users can be wireless. Without having to be defenseless.

ThinkPad R50e

DISTINCTIVE INNOVATIONS

ThinkVantage Rescue and Recovery – one button recovery and restore solution

SYSTEM FEATURES

Intel® Centrino™ Mobile Technology
Intel® Pentium® M Processor 725 (1.60GHz)[1]
Intel® PRO/Wireless 2200BG (802.11b/g)[2]

Microsoft® Windows® XP Professional[3]

15" XGA TFT Display (1024x768)

256MB DDR SDRAM[4], 40GB Hard Drive[5]

$949* (P/N 1842QDU)

ThinkPad Premiere Leather Carrying Case

$99 (P/N 10K0209)

ThinkPad Women's Executive Red Leather Tote

$130 (P/N 22P8858)

ThinkPad T43 with Integrated Fingerprint Reader

Perfect balance of performance and portability.

DISTINCTIVE INNOVATIONS

ThinkVantage Client Security Solution 6.0[6]– Strong security as a standard feature

SYSTEM FEATURES

Intel® Centrino™ Mobile Technology
Intel® Pentium® M Processor 740 (1.73GHz)[1]
Intel® PRO/Wireless 2200BG (802.11b/g)[2]

Microsoft® Windows® XP Professional[3]

15" XGA TFT Display (1024x768)

64MB ATI Mobility RADEON x300 Graphics

512MB DDR2 SDRAM, 60GB Hard Drive

Ultrabay Slim CD-RW/DVD ROM Combo

Only 1" thin[7] and 4.7-lb travel weight[8]

1-yr limited warranty[11]

THINK EXPRESS MODEL

$1599 (P/N 2686DHU)

With the Think Express Program, ThinkPad notebooks are preconfigured with your business, and your budget, in mind.

To shop or locate your local reseller

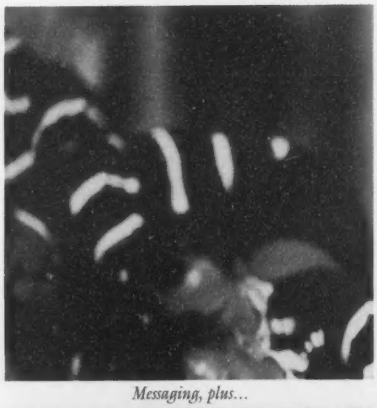
Call 1 866-426-0009
Go to thinkpad.com/security/m583

ThinkPad is a product of Lenovo.

ThinkPad®

be subject to additional charges. **(12) Systems with Limited onsite service:** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts. A technician will only be sent onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. **Trademarks.** The following are trademarks of Lenovo: ThinkPad, ThinkCentre and UltraConnect. IBM and the IBM logo are registered trademarks of IBM and are used under license. Microsoft and Windows are registered trademarks of Microsoft Corporation. Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other company, product and service names may be trademarks or service marks of other companies. ©2005 Lenovo. All rights reserved.
Visit www.lenovo.com/safecomputing periodically for the latest information on safe and effective computing.

Innovations by InterSystems



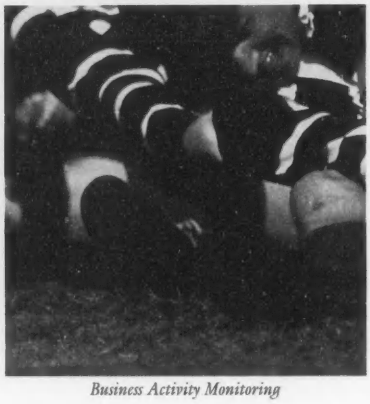
Messaging, plus...



Composite Application Development, plus...



Business Process Orchestration, plus...



Business Activity Monitoring

Integrate Your Enterprise. Pull It Together Faster With Ensemble.

Ensemble's innovations will enable you to successfully integrate your enterprise faster. Much faster.

This is the first platform to offer a seamless ensemble of integration and development technologies for every type of integration project. Ensemble's *universal integration platform* is the innovative fusion of an integration server, data server, application server, and portal development software. With its single development and management environment, Ensemble will dramatically reduce your time-to-solution.

We back these claims with this money-back guarantee: *For up to one year after you purchase Ensemble, if you are unhappy for any reason, we'll refund 100% of your license fee.** We are InterSystems, a global software company with a track record of innovation for more than 25 years.

InterSystems
ENSEMBLE™

Request a FREE proof-of-concept project at **www.InterSystems.com/Ensemble11A**

* Read about our money-back guarantee at the web page shown above.

© 2005 InterSystems Corporation. All rights reserved. InterSystems Ensemble is a registered trademark of InterSystems Corporation. 8 05 EnsInvt1ICoWe



Supersmart Storage
IBM Almaden Research Center's Intelligent Bricks hardware and Kybos software work together to make data storage easier to manage, lower maintenance costs and reduce environmental impact. **Page 34**

Fleet-Footed Worm Blocker
Microsoft Research's Vigilante detects fast-replicating worms, generates protective "filters" against them and sends alerts to other machines on the network. **Page 36**

Closely Quartered Chips
Sun Labs' proximity communication transmits data between two chips extremely close to each other, allowing for I/O communication that's 60 times faster than is possible using conventional circuit boards. **Page 40**

New Under The Sun

COMPUTERWORLD HORIZON AWARDS 2005

Take a look inside the research labs and private companies that earned top honors in the first annual Computerworld Horizon Awards, where technologies that defend against worms, analyze voice recordings and more are being prepared for the future.

NETSCOUT'S PROGRESSIVE ANALYTICS

Network Monitor With a Brain

By analyzing network traffic in real time, this statistical tool catches anomalies early, then diagnoses the cause.

BY GARY H. ANTHES

THERE'S A LOT NOT TO LIKE about conventional computer performance monitoring tools, say the product developers at NetScout Systems Inc.: They're much too slow, they flag problems without diagnosing them, and they give so many false alerts they are often ignored.

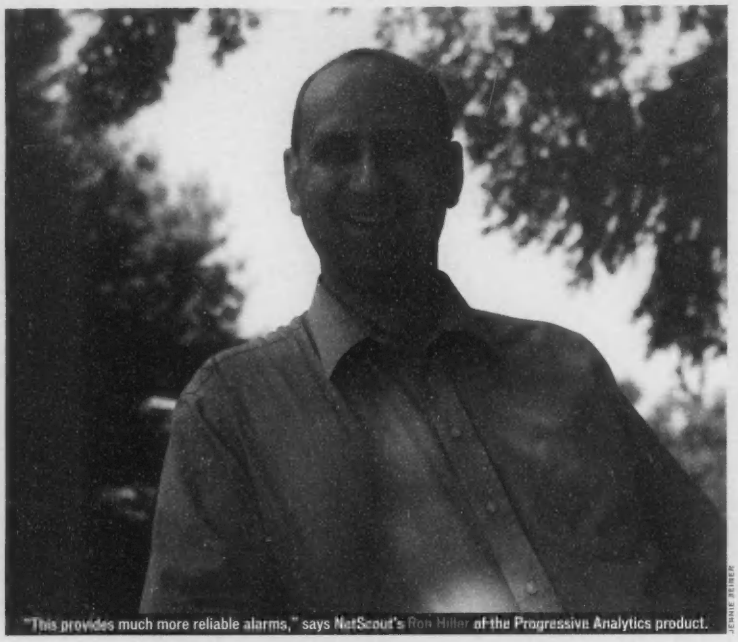
NetScout, a Computerworld Horizon Award winner, says the answer lies in its Progressive Analytics offering, a statistical tool that learns normal network behavior over time and spots and diagnoses anomalies long before conventional tools are aware of them. It will be introduced commercially by the end of the year, the company says.

NETSCOUT SYSTEMS INC.
www.netscout.com

PRODUCT: Progressive Analytics

KEY DEVELOPER: Ron Hiller

Progressive Analytics is the brainchild of Ron Hiller, now director of engineering analytics at NetScout in Westford, Mass. Hiller worked on network anomaly detec-



"This provides much more reliable alarms," says NetScout's Ron Hiller of the Progressive Analytics product.

JENNIE REINER

tion years ago at Bell Laboratories and, he says, "it became obvious that the standard approaches really don't work."

So Hiller found some venture capital, launched Quantiva Inc. in 2000 and began applying the lessons learned from telephone network problems. In April, NetScout bought Quantiva and began incorporating Hiller's work into its nGenius family of performance management products.

Hiller says traditional products are based on simple rules, such as sounding an alarm if percentage utilization of a resource or response time rises to some predetermined level. Users are encouraged to set the thresholds high to avoid false alerts, and they often don't get an alert soon enough to diagnose and respond before a service outage occurs.

But Hiller says Progressive Analytics detects anomalies by analyzing network traffic in real time and comparing it to normal patterns of behavior. It then automatically diagnoses the cause of the problem, rather than leaving that to manual efforts.

He says conventional tools are often not trusted because of false alarms.

"The network operations guy will come in in the morning and delete all the ones from the night before," he says. "If the phone never rings, he still has his job." Progressive Analytics reduces the number of false alerts by a factor of 100, he says.

Hiller says NetScout tested the technique on the network traffic of a major financial services Web site. "It found anomalies caused by a mainframe in the back office that the company's network operations center had not detected with their conventional tools," he says.

"I don't see this as something routine in the marketplace yet, and I think that it could provide some tremendous advantages for NetScout over time," says Dennis Drogseth, an analyst at Enterprise Management Associates in Boulder, Colo. "Quantiva brings them . . . toward a higher-level value proposition that includes application as well as network performance at a more strategic level. This can enable them to reach up the food chain in IT toward more executive buyers."

At present, the technology looks at application traffic patterns gathered from passive, network-layer instrumentation. But Hiller says its reach will be extended to individual clients and servers, as well as to the applications on them. The core software is likely to be installed on a server in a company's network operations center but can take data from multiple points around the enterprise via NetScout's nGenius probes, he says.

Asked if, in addition to detecting problems and diagnosing them, Progressive Analytics might one day automatically fix them as well, Hiller stops short of promising that it will. However, he notes, "the buzzwords in the industry are *autonomic computing* and *adaptive computing*. But the problem with traditional feeds into those systems is you can't fix something if you are not really sure it's broken. This provides much more reliable alarms." **55942**

COMPUTERWORLD HORIZON AWARDS 2005

NICE SYSTEMS' NICE PERFORM

Voice Analyzer Picks Up Clues

This app hears nuances in call center recordings that can be used to improve service quality. **BY DREW ROBB**

DID YOU EVER STOP to wonder about the sheer volume of time we spend talking to customer service reps in call centers? According to Incoming Calls Management Institute Inc., there are 50,600 call centers in the U.S. containing 2.86 million agent positions. Add another 4,500 call centers in Canada (212,000 agent positions) and probably another million or so agent positions overseas devoted exclusively to the U.S. market. Let's say there are 4 million agents each talking to customers 1,000 hours per year — that's 4 billion hours. Imagine if that data could be captured and mined effectively.

Enter Israeli company Nice Systems Ltd. and its Nice Perform application, which analyzes voice recordings (typically retained for quality control) and combines the information with a wealth of other data, including voice over IP, e-mail, chat and agent screens.

NICE SYSTEMS LTD.
www.nice.com

PRODUCT: Nice Perform

KEY DEVELOPERS:
Omri Hayner, Itay Grushka, Shai Shefer, Ronit Efrat, Gili Aharoni, Moshe Wasserblat, Eliran Modan and Leon Portman

"The drivers for customer behavior are increasingly hard to get due to limitations placed on outbound communications by legislation such as the [Federal Trade Commission's do-not-call] list," says Seema Lall, an analyst at Frost & Sullivan Ltd. "Nice Perform

Continued on page 32



Find the tools and guidance you need for a well-guarded network at microsoft.com/security/IT

- **Microsoft Windows XP Service Pack 2:** Download it for free and get stronger system control and proactive protection against security threats.
- **Free Tools & Updates:** Download free software like Microsoft Baseline Security Analyzer to verify that your systems are configured to maximize security. Manage software updates easily with Windows Server Update Services.
- **Microsoft Risk Assessment Tool:** Complete this free, Web-based self-assessment to help you evaluate your organization's security practices and identify areas for improvement.
- **Internet Security and Acceleration Server 2004:** Download the free 120-day trial version to evaluate how the advanced application-layer firewall, VPN, and Web cache solution can improve network security and performance.

Microsoft

COMPUTERWORLD HORIZON AWARDS 2005

Continued from page 30

offers enterprises the means to tap into the hidden information gold mine within agent/customer-interaction recordings."

Lall says creative application of this technology could significantly affect the bottom line. The word-spotting and data-mining capabilities, for instance, could be used to monitor compliance with regulations such as the do-not-call list and avoid hefty penalties. Contact centers could harness the data to improve quality management, raise productivity, conduct root-cause analyses and enforce agent adherence to scripts. Alternatively, sales and marketing could use it for sales planning and monitoring, or to prevent customer defections.

"Nice Perform analytics turn millions of customer interactions into structured data that can be utilized by existing business intelligence and customer intelligence solutions," says Yoel Goldenberg, director of contact centers and enterprise solutions at Nice Systems. "This dramatically shortens the ROI period for these solutions, makes them more efficient and means that many more people in the enterprise can take advantage of them."

Nice Systems already had a background in word spotting, emotion detection and speech recognition, so this product grew out of existing expertise. The entire development was undertaken in-house. It's built on Microsoft Corp.'s .Net technology.

Nice used extreme programming methodologies within a structured source management environment, with regular code reviews. Along the way, developers ran into some hurdles — primarily as a result of the great variety of customer environments that had to be accommodated. For example, Perform had to work with a wide range of telephony switches, computer/telephony integration (CTI) servers, storage management systems, firewalls and more. This led to one major technological change during the process — a move from ASP .Net to smart-client technology, which improved functionality and simplified deployment.

Another stumbling block was figuring out how to filter out the music that customers hear when they're on hold or being transferred to another agent. "The speech analysis engine often interprets music as a new speaker or as a very emotional reaction for the current speaker," says Goldenberg. "In order to eliminate this problem, we included the CTI indications in the analysis process so that the engine doesn't analyze on-hold segments."

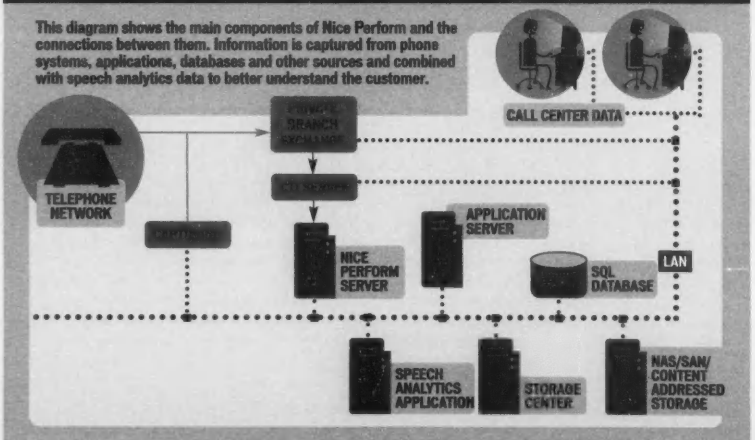
The product has been on the market for about a year, and minor enhancements are planned for next year. According to Lall, Nice provides a comprehensive analytics system. She says speech analytics products such as Nice Perform hold great promise for enterprises looking to harness the contact center as an effective source of customer information.

"Speech analytics products are poised for immense growth over the coming years as enterprises get better educated on the capabilities of these types of products and utilize them creatively to derive business value," says Lall. **56085**

Robb is a Computerworld *contributing writer in Los Angeles.*

HOW IT WORKS

This diagram shows the main components of Nice Perform and the connections between them. Information is captured from phone systems, applications, databases and other sources and combined with speech analytics data to better understand the customer.



Horizon Awards Methodology

The Computerworld Horizon Awards were established this year to make readers aware of especially cutting-edge technologies from research labs and companies that are looming on the horizon.

Beginning this past May, *Computerworld* accepted nominations online for innovative technologies that meet the needs of enterprise IT. Eligible organizations were required to have a technology that meets one of the following needs:

- **Provides the means for applications integration across disparate systems and geographies.**
- **Facilitates communication and collaboration among geographically dispersed teams or business units.**
- **Provides security for corporate information assets, and privacy for employee and customer information.**
- **Manages burgeoning needs for information storage and disaster recovery in today's regulated world.**
- **Provides manageable mobile/wireless computing for office workers, remote employees and business travelers.**
- **Improves communications and visibility within the supply chain.**
- **Makes it easier to manage the plethora of computing, networking and storage devices in today's corporations.**
- **Manages e-commerce and Web initiatives and helps them turn a profit.**
- **Extracts and leverages critical business intelligence from expanding data stores.**
- **Develops high-quality in-house software applications on time and on budget that meet business needs.**
- **Makes basic improvements in hardware or software architecture that enhance processing or communication for a wide variety of applications.**


HACKERS, VIRUSES,
AND WORMS
ARE MET WITH SWIFT
AND DECISIVE ACTION
MICROSOFT.COM/SECURITY/IT
Microsoft



The IBM team, counterclockwise from left: Robert Garner, Jody Glider, Moidin Mohiuddin, Winfried Wilcke, Theodore Wong, Claudio Fleiner and Richard Goldman.

JOHN MADERE

COMPUTERWORLD HORIZON AWARDS 2005

IBM ALMADEN RESEARCH CENTER'S INTELLIGENT BRICKS AND KYBOS SOFTWARE

Supersmart Storage

When one set of disk drives fails, this storage system assigns new ones to take over. **BY STACY COLLETT**

THE HUMAN BRAIN COMES equipped with more transmitting neurons than it needs. When a neuron dies, the brain automatically lets other neurons take over. So why can't storage systems do the same thing when a disk drive fails — without an administrator's help?

Moidin Mohiuddin and his research team at IBM's Almaden Research Center in San Jose are exploring that paradigm with Intelligent Bricks hardware and Kybos software. Together, they are creating an intelligent storage system architecture that will make data easier to manage, lower maintenance costs and reduce environmental impacts such as cooling, power, floor space and noise.

The basic unit of the scalable hardware is called a brick, an idea that was developed by IBM researcher Winfried Wilcke in 2001. Each brick contains a processor, some disks and an Ethernet switch chip. Bricks are placed next to one another and communicate with their neighbors without cables or connectors by using capacitive couplers on each brick face, forming a 3-D, high-speed mesh network.

While each brick uses inexpensive hardware without internal redundancy, the entire 27-brick cube — which is about the size of a small ottoman — has a 26TB capacity and is highly reliable and interactive.

When used with the Kybos (Greek for "cube") software, the system senses that a brick or set of disk drives has failed and assigns new bricks to take over that function.

Software users will also be able to enter the performance requirements they desire, such as number of I/Os per second, maximum latency allowed or data-retrieval speed, and the software will configure the system to work at that level.

The key is providing a lot of redundancy, explains Mohiuddin, senior manager of advanced storage subsystems at IBM. The prototype uses 25% more bricks than are actually needed to store the data, which allows for fail-over space. As a result, "you can wait four years before you do any servicing," because damaged disk drives don't need replaced quickly, he adds.

The bricks' small size cuts down on floor-space requirements, and they are cooled by water, not fans, reducing noise and power consumption.

One analyst gives this emerging technology mixed reviews. "It's not clear that [brick technology] will have a transformational impact on acquisition costs," says Gartner Inc. analyst Stanley Zaffos, who is familiar with brick and large-array hardware. "On the other hand, the software looks more interesting because it holds the promise of lowering TCO by creating an infrastructure that's more flexible, extensible and manageable."

With only a 10-member research team working on such a large project, Mohiuddin relied on partnerships with other IBM units to help with the prototype. IBM Germany, for instance, designed some of the circuit boards, while IBM's Watson Research Center in Yorktown Heights, N.Y., helped to build capacitive couplers and assemble the bricks.

Today, the team must keep up with advances in disk drive technology. "Our first prototype had components that were available in 2001," Mohiuddin says. "So we want to redesign the whole system with newer components" that could increase data capacity on each brick from 1TB to 4TB.

By 2010, Mohiuddin says he expects to see the fruits of his research used in storage systems for medical images, simulation applications, Web sites and other storage-intensive applications.

Today, however, the hardware and software projects are progressing at separate paces. So Kybos might be available first for existing storage systems. "But the storage system would need high communication bandwidth because [Kybos] moves data around to meet your needs," according to Mohiuddin.

Together, Intelligent Bricks and Kybos create IBM's "grand vision" for future storage systems, he adds. "It's inexpensive, scalable and easy to administer." **56114**

IBM ALMADEN RESEARCH CENTER
www.almaden.ibm.com

PRODUCTS: Intelligent Bricks hardware and Kybos software

KEY DEVELOPERS: Winfried Wilcke, Moidin Mohiuddin and the Intelligent Bricks team

Collett is a Computerworld *contributing writer. Contact her at stcollett@aol.com.*

DON'T LET SPYWARE SABOTAGE YOUR ENTERPRISE.

The next threat is no threat with Trend Micro.

Expose and eradicate spyware with Trend Micro's Enterprise-class, multi-level, anti-spyware solutions. They're the only solutions that block and clean at the gateway—the most effective point of control. Trend Micro. #1 global leader at the gateway and industry pioneer. Whether it's a virus, worm, spyware, or spam, we've got you covered.

For a FREE evaluation and IDC whitepaper,
go to www.trendmicro.com/spyware



©2005 Trend Micro Inc. All rights reserved. Trend Micro and the t-ball logo are trademarks or registered trademarks of Trend Micro Inc. All other company and/or product names may be trademarks or registered trademarks of their owners.

TREND MICRO™

MICROSOFT RESEARCH'S VIGILANTE

Fleet-Footed Worm Blocker

Software can detect and defend against worms in network traffic at lightning speed. BY GARY H. ANTHES

JUST BEFORE 5:30 GMT on Saturday, Jan. 25, 2003, the Slammer worm crawled into the Internet. The world's first high-speed worm doubled in size every 8.5 seconds and infected more than 90% of the world's vulnerable hosts within 10 minutes, according to a report published by the University of California, Berkeley.

Slammer caused network outages, airline flight cancellations and automated teller machine failures, according to the report. And subsequent worms have gone further and faster.

Now Horizon Award winner Microsoft Corp. is developing a defense against such fast-replicating worms. Vigilante, experimental software from Microsoft Research in Cambridge, England, detects worms in network traffic — even new ones with no known signatures — then generates "filters" against them and sends alerts to other machines on the network. The process is quick enough to block worms before humans are even aware of their existence, says Manuel Costa, a research software design engineer.

MICROSOFT RESEARCH
www.microsoft.com

PRODUCT: Vigilante

KEY DEVELOPER: Manuel Costa

Computers running Vigilante generate "self-certifying alerts" when they detect an attack and then send them to other machines, which can verify the alerts before taking defensive action. The Vigilante algorithms that detect worms and issue alerts are computationally intensive and typically would run on just a few nonproduction "honeypot" servers, Costa says. But the protection mechanisms that respond to the alerts are very efficient and would run on every machine on a company's network, he says.

Costa says Vigilante is strictly a research project at present and may or may not end up as a product. But, he says, "we are actively talking with Microsoft product groups." He says his team is "looking to improve every part of the system," including its speed and ability to detect a wide variety of worms.

Costa says his research team faced two major challenges when it got started in December 2003. The first was to create algorithms that would work in a general way so as to detect worms not previously seen. A related challenge was to generate no false alerts, which would cause it to block legitimate traffic. The first challenge hasn't been entirely met, Costa says, and is the subject of further research. But as for the false alerts, he says, "when an alert is verified, we are absolutely certain it's a bad thing."

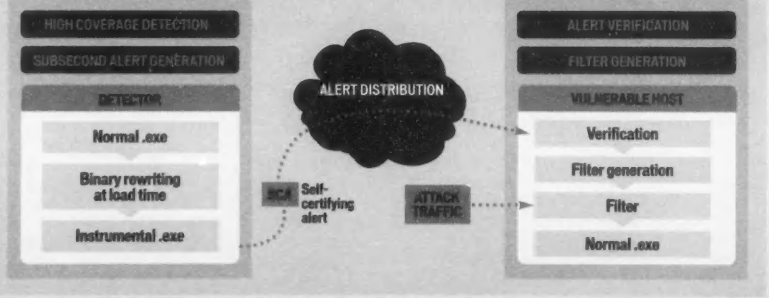
"This has potential . . . specifically in large enterprise or government networks, where a degree of uniform control policies exist for the security systems," says Robert Ghanea-Hercock, a principal scientist at BT Group PLC in London. "But it is less valuable in the open network or broadband sector due to the lack of cooperation between the security vendors."

Matthew Williamson, a senior research scientist at Sana Security Inc. in San Mateo, Calif., says some tough technical issues need to be resolved before tools like Vigilante see widespread use. "However, there is no question that we need adaptive security mechanisms in general, and adaptive mechanisms themselves are becoming more common," he says.

But developing worm medicine is like planning to fight the last war, Williamson says. "The worm-writing community has been joined by a much larger group of malware writers who are professional criminals motivated by making money on the Internet by stealing information, extortion, blackmail, phishing and so on," he says. "Thus, while there might be more big worms, there will definitely be more malicious spyware and attacks designed both to steal and exploit stolen information." 55821

HOW IT WORKS

Vigilante detects worms by analyzing attempts to infect applications on the host and then broadcasts self-certifying alerts. The alerts are proofs of vulnerability that other hosts can use to generate filters while allowing normal execution to continue.



COMPUTERWORLD HORIZON AWARDS 2005

PYTHON SOFTWARE FOUNDATION'S PYTHON

Put in Plain Language

The highly portable, object-oriented Python language moves into enterprise application development. BY MARC L. SONGINI

IT'S KNOWN AS A programmer's programming language. And after years of fine-tuning, the open-source Python is graduating from being the darling of a select group of developers to being the brains behind some mainstream applications.

Guido van Rossum, principal architect of the language and founder of the nonprofit Python Software Foundation, developed the earliest version of the Python language about 15 years ago with help from two partners — Jack Jansen and Sjoerd Mullender — largely as a hobby. His goal was to create a highly portable, object-oriented language that was less complex than Java or C ++ and could be manipulated by developers in a toolbox-like environment.

PYTHON SOFTWARE FOUNDATION
www.python.org

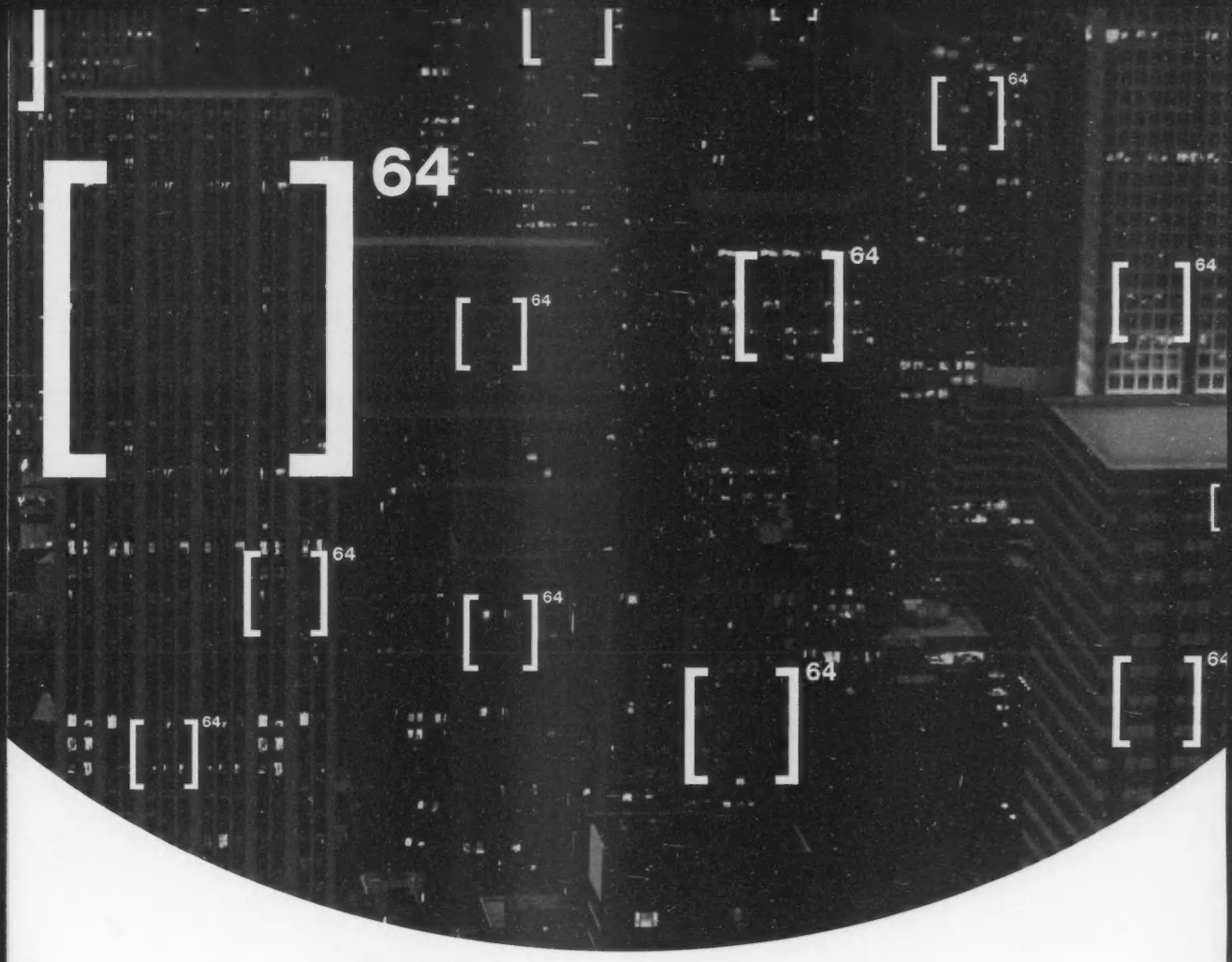
PRODUCT: Python

KEY DEVELOPER: Guido van Rossum

"It really is a programming language that tries hard to make the programmer happy," says van Rossum. "Whether a small application or large application, its users are continually wowed at how quickly they get results and do prototypes and show demonstrations, and how soon the prototype can be actually used in an application."

Although Python isn't generally well

Continued on page 40



The world's most-deployed server platform now supports 64-bit applications.

The Intel® Xeon™ processor now works harder for your business than ever. With innovative platform features that enable power-saving options, flexible memory, I/O and storage configurations. And, of course, continued support for all your existing 32-bit applications.

How can Intel Xeon processor–based servers serve you?

intel.com/go/xeon

intel.

©2005 Intel Corporation. Intel, Intel Inside, the Intel Inside logo, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. All rights reserved.

PAY MORE ATTENTION TO SERVERS BEFORE YOU BUY THEM.

SO YOU CAN PAY LESS ATTENTION

IBM eServer™ xSeries®

Affordable, reliable, easy to manage: eServer xSeries with Intel® Xeon™ Processors



IBM eServer **xSeries 226 Express**

An entry-level server that offers the reliability and performance needed for business-critical computing. Easy set up, deployment, and access to all major system components.

System features

- Up to two Intel Xeon Processors 3GHz/2MB
- Two-way tower with rack capability
- Up to 7 hot-swappable SCSI hard disk drives
- Two 73GB HS SCSI HDD standard
- Limited warranty: up to 3 years on-site[3]

From **$1,639***[4]

(Other configurations as low as **$1,229***[4])

IBM Financing Advantage

Only **$45** per month[5]



IBM eServer **xSeries 346 Express**

Help maximize performance and improve availability in a rack dense environment with Xtended Design Architecture.™ Includes features like Calibrated Vectored Cooling, an IBM innovation that helps to cool your system and improve uptime.

System features

- Up to two Intel Xeon Processors 3GHz/2MB
- Two-way 2U rack server
- Up to 2GB DDR2 memory using 8 DIMM slots with enhanced memory
- Limited warranty: up to 3 years on-site[3]

From **$3,999***[4]

(Other configurations as low as **$2,219***[4])

IBM Financing Advantage

Only **$109** per month[5]



IBM eServer **xSeries 366 Express**

With the power of 3rd generation Enterprise X-Architecture," it sets a new standard for 4-socket, 64-bit servers. Delivers increased performance, systems manageability, and simultaneous support for 32 and 64-bit apps.

System features

- Up to four 64-bit Intel Xeon Processors MP 3.66GHz
- 64GB DDR memory
- 4GB memory expandable to 64GB
- Six 64-bit Active PCI-X 2.0
- IBM Director
- Calibrated Vectored Cooling
- Limited warranty: up to 3 years on-site[3]

From **$13,779***[4]

(Other configurations as low as **$6,999***[4])

IBM Financing Advantage

Only **$379** per month[5]

IBM eServer BladeCenter™

Flexible and easy to use



IBM eServer **BladeCenter HS20 Express**

Designed to support the Intel Xeon Processor and packed with high-availability features, the eServer BladeCenter HS20 with an industry-leading modular design delivers density without sacrificing processor performance.

System features

- Up to two Intel Xeon Processors 3.20GHz/2MB
- Up to 14 blades per chassis
- Supports both 32 and 64-bit applications
- IBM Director
- Limited warranty: up to 3 years on-site[3]

From **$2,979***[4]

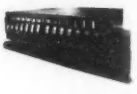
(Other configurations as low as **$1,839***[4])

IBM Financing Advantage

Only **$82** per month[5]

IBM TotalStorage®

Simplify storage management to help improve productivity



IBM TotalStorage **DS300 Express**

Entry-level, cost-effective SCSI storage systems designed to deliver advanced functionality at a breakthrough price. Provides an exceptional solution for work group storage applications, such as e-mail, file, print, database and Intel Xeon Processor-based servers.

System features

- 3U rack-mount entry level
- Support for up to 14 Ultra320 SCSI disk drives
- Starts at 584GB / Scales to 4.2TB
- Limited warranty: 1 year on-site[3]

From **$5,355***

(Other configurations as low as **$2,995**)

IBM Financing Advantage

Only **$147** per month[5]

*All prices are IBM's estimated retail selling prices that were correct as of June 3, 2005. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. 1. IBM Director is not available on TotalStorage products. 2. IBM Director must be installed. Products included in IBM Express Servers and Storage may also be purchased separately. 3. Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. 4. Prices subject to change without notice. Price may not include a hard drive, operating system or other features. Contact your IBM representative or IBM Business Partner for the most current pricing in your geography. 5. IBM Global Financing terms and conditions and other restrictions



TO THEM AFTER.

With IBM® Express Servers and Storage™ offerings designed for mid-sized businesses, help is here.

You've already got a zillion things that require your attention – you shouldn't have to worry about your systems. That's why IBM Express products offer reliability features, which help them do their job so you can focus on yours.

Take IBM Director, which comes standard.[1] It can proactively notify you of a potential problem – up to 48 hours in advance. Or our Calibrated Vectored Cooling feature available on select xSeries systems. It can cool your system more efficiently. This means more features can be packed into a smaller server – for more functionality and greater flexibility.

It's just an example of our self-managing features that help you take back control of your IT. Which can help lower your maintenance costs, too. Because with IBM Express Servers and Storage, innovation comes standard. It's not optional. Plain and simple, it's built in.[2]

There's also one more great feature – your IBM Business Partner. Which means you can have a one-to-one chat with someone who understands your industry and your business – and who's located in your neck of the woods. And for mid-sized businesses, that's really big help in a really big way.

THE WORLD'S HELP DESK

Learn more about our full range of IBM Express products and financing options. And find the IBM Business Partner near you – who can help you choose the right system to meet your requirements.

ibm.com/eserver/helpishere1

1-800-IBM-7777

mention 104CE01A

SIZE OF BUSINESS

HELP FOR ANY SIZE PROBLEM

IBM

IBM TotalStorage **DS400 Express**

With advanced functionality, the DS400 provides an exceptional solution for work group storage applications. It supports Intel Xeon Processor-based servers and offers Fibre Channel drives designed for high performance, and hot-swap Ultra320 SCSI drives designed for high reliability.

System features

2GB Fibre Channel storage systems area network (SAN)

3U rack-mount entry level

Starts at 584GB / Scales to 12TB

Limited warranty: 1 year on-site[3]

From **$8,495*** (Other configurations as low as **$4,995**)

IBM Financing Advantage
Only **$234** per month[4]

may apply. Monthly payment provided is for planning purposes only and may vary based on customer credit and other factors. Rates and offerings are subject to changes, extension or withdrawal without notice. IBM, eServer, BladeCenter, xSeries, TotalStorage, IBM Express Servers and Storage, Enterprise X-Architecture and Xtended Design Architecture are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Intel, Intel Inside, the Intel Inside logo, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other company, product and service names may be trademarks or service marks of others. © 2005 IBM Corporation. All rights reserved.

Continued from page 36

known, it boasts about a half-million users in the open-source community. Recently, the language has gained a foothold in the enterprise and has been embraced by organizations like Google Inc., NASA and special effects company Industrial Light & Magic. San Mateo, Calif.-based Elemental Security Inc., which sells software that helps companies comply with security policies, is using Python because it has an embedded capability to quickly add new or customized policies and deploy them enterprisewide on the fly, says van Rossum.

The beauty of Python is that a developer in virtually any industry can use it to very quickly bring up an application with a Web server and an open-source database without requiring the same amount of money as a lengthy project, says Michael Goulde, an analyst at Forrester Research Inc. Simple development is its strong suite, however. Python isn't a good fit for for heavy-duty functions such as online transactional processing.

What sets Python apart from Perl and other dynamic languages is its ease of maintenance. Python is an especially clean language in terms of readability and is very modular, like Java and C#. In general, modular languages are considered easier to maintain because they clearly separate code into its constituent parts, says Richard Monson-Haefel, an analyst at Burton Group Inc. in Midvale, Utah. Python may usurp Java and C++ in terms of popularity, he says.

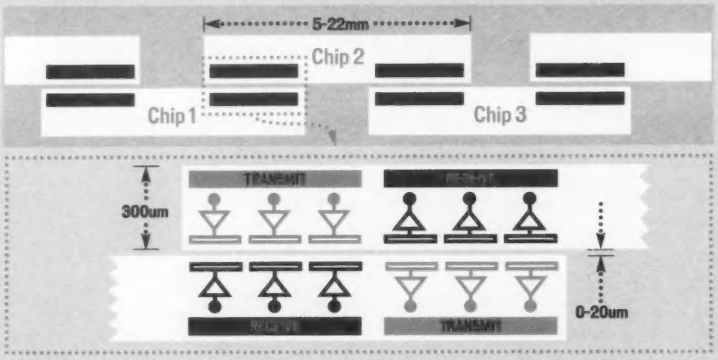
"I'm completely confident that the successor to Java and C/C++/C# will be a dynamic language such as Python or Ruby. Python has a larger ecosystem today than Ruby, so it would seem to have a very good chance at becoming the successor. It's not a stretch to say that the successor to Java and C/C++/C# will be a dynamic language, and that dynamic language could be Python," Monson-Haefel says. He notes that it has all the strengths of an excellent development language in that it's modular, mature, well supported and secure. It's also currently being adapted to both the Java and .Net platforms.

But despite ongoing improvements, van Rossum acknowledges that not all of Python's bugs have been worked out. Version 2.5 is expected in early 2006, and among the planned updates are tools that automate cleanup and correction of code.

Although still in the planning stages, a radically new version, Python 3.0, will unify user and systems classes, says van Rossum. "It's going to be the one release where we allow ourselves to break backward compatibility; this is sometimes necessary in order to fix early design mistakes." **56117**

HOW IT WORKS

In proximity communication, chips align within tens of microns of one another. Data transmits across the gap by coupled charged particles. "Electronic alignment" allows the transmitters and receivers to shift positions and compensate for misalignment.



SUN LABS' PROXIMITY COMMUNICATION

Closely Quartered Chips

Data makes the leap between chips, creating communication that's 60 times faster. BY STACY COLLETT

MEDICAL RESEARCHERS IMAGINE a day when gene-mapping simulations will take an hour or two to compute instead of a week, on systems that process data up to 100 times faster than they do today. That dream could become a reality in the next five years with technology called proximity communication that's under development at Sun Microsystems Laboratories in Menlo Park, Calif.

For years, Sun has been looking for ways to "get computers back on the improvement curve they've fallen off of," says principal research scientist Robert Drost. While processor speeds have improved up to 4,000%, I/O speeds have improved by a factor of just 10 to 15. Proximity communication could catapult I/O speeds into the stratosphere.

In early 2000, research fellow and Sun Labs Vice President Ivan Sutherland hatched an idea while visiting his friend Steve Jacobson at Sarcos Research Corp., a Salt Lake City-based manufacturer of robotics and advanced prosthetics. Developers there were using a process called capacitive sensing to measure minute shifts in the movement between a chip and a glass plate — movements as small as one millionth of a centimeter.

Sutherland hypothesized that if tiny mechanical movements could be accomplished through capacitive sensing, then surely it should be possible to put chips next to one another and send data using that same physical phenomenon.

Sutherland developed chip-to-chip communication technology and then enlisted the expertise of Drost, who at 34 was named to the 2004 list of the world's 100 Top Young Innovators Under Age 35 by MIT's *Technology Review*.

Proximity communication is a process where two chips, each with transmitter and receiver circuits, are positioned extremely close to each other. Without wires or soldered connections, data is transmitted across the gap by "capacitive coupling," which is coupling between charged particles that are at rest. Fewer wires and connections mean fewer bottlenecks in multiprocessor computers.

Very fast communications could reduce the need for big on-chip caches, freeing up real estate for other processing functions, Drost says.

SUN MICROSYSTEMS LABORATORIES
www.sun.com

PRODUCT: Proximity communication

KEY DEVELOPER: Ivan Sutherland

The result: The technology could enable processor chips to communicate 60 times faster and with 30 times less energy than is possible using conventional circuit boards.

Proximity communication relies on chips that

are placed very close together — a tough configuration to manufacture in high volumes at a low cost.

To compensate for misalignment between chips, Sun researcher Robert Bosnyak and Chief Technology Officer Greg Papadopoulos developed a technique called electronic alignment that allows the transmitters and receivers on each chip to shift positions to compensate for a few hundred microns of misalignment.

"That was absolutely critical," says Drost. "Before that, [proximity communication] seemed really interesting but impractical."

Drost says he expects proximity communication to greatly improve the speed of applications requiring high-performance computing, such as weather modeling, car-crash simulations or drug simulations.

In 2003, the U.S. government awarded Sun Labs a $50 million Defense Advanced Research Projects Agency contract to help design next-generation supercomputers. That project will be completed in 2010, but proximity communication technology will show up in other applications before then, Drost says. When that happens, he adds, "it's a whole different ballgame." **56116**

Collett is a Computerworld *contributing writer. Contact her at stcollett@aol.com.*

COMPUTERWORLD HORIZON AWARDS 2005

IBM ALMADEN RESEARCH CENTER'S SOVEREIGN INFORMATION INTEGRATION

Privacy-Minded Security

Double-encrypted data allows for security checks, but without violating privacy rules. **BY DREW ROBB**

INFORMATION SHARING IS A thorny subject these days. The whole idea of the Internet is to make anything available to anyone in real time. Instant access is the mantra of the modern world. Yet this philosophy collides solidly with privacy rights and the need for security.

Take the case of an airline working with the government on antiterrorist issues. The airline's passenger lists might have to be compared to a Homeland Security terrorism watch list, yet both sides have a vested interest in protecting their databases. The authorities really need to know only that Johnny Dangerous is on Flight 450 and should never find out the names of the other passengers (thereby protecting their privacy and the airline from privacy violation complaints), and the airline should never get to see who else is on the government watch list. Problems like this make security a real challenge today.

"Security vs. privacy is a false choice," says Rakesh Agrawal, IBM fellow at the IBM Almaden Research Center in San Jose. "By making technological advances, we can have both without impeding the flow of information."

IBM's Sovereign Information Integration (SII) technology is an attempt to solve this dilemma. It enables companies to gain value from their data while complying with privacy policies and legislation. Current approaches to information integration — centralized data warehouses and federations — are based on the assumption that all of the information in each database can be revealed to the other databases. This may not actually be desired, however, in cases such as those involving medical information, national security, law enforcement, intellectual property law, and business networks and partnerships.

"IBM's solution is for each party to encrypt its own data and then send it to the other party to encrypt again," says David Rabb, a consultant at Rabb Associates Inc., a Chappaqua, N.Y.-based company that evaluates database technologies. "If the encryption methods are commutative, meaning you get the same result whichever encryption is applied first, then a name or ID number appearing in both files would have the same double-encrypted value and be recognized as a match."

Thus, double-encrypted data can be compared without violating disclosure rules. Nonmatching values, on the other hand, would be unreadable by either party, because they would be protected by the other party's encryption. Furthermore, this innovative encryption technique also enables information sharing via a Web-based query interface.

The system was developed by Agrawal along with a team consisting of Ramakrishnan Srikant, Alexandre Evfimievski and Dmitri Asonov. It was funded out of the $5 billion that IBM invests in research and development annually. SII is the functional component of IBM's Hippocratic Database, which ties into health care applications to let users indicate who should have access to certain patient data.

IBM ALMADEN RESEARCH CENTER
www.ibm.com

PRODUCT: Sovereign Information Integration

KEY DEVELOPERS: Rakesh Agrawal, Ramakrishnan Srikant, Alexandre Evfimievski and Dmitri Asonov



JOHN HARDING

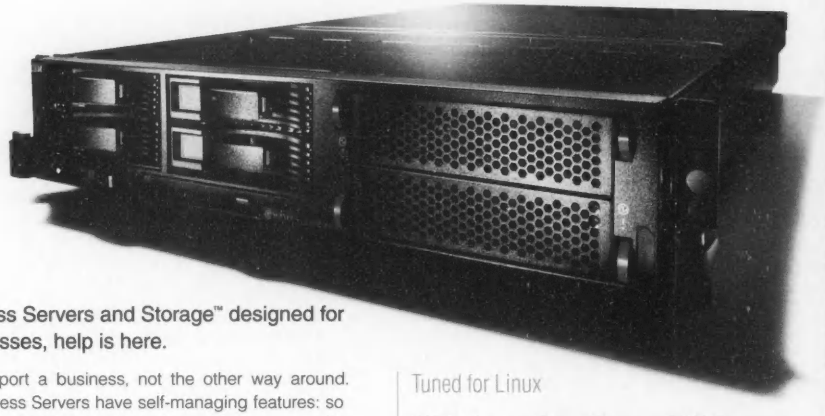
"Security vs. privacy is a false choice," says Rakesh Agrawal, a fellow at the IBM Almaden Research Center.

Agrawal says his team is now exploring the use of commercially available hardware to speed up the query execution of SII, as well as identifying additional application areas for the technology.

"We are validating technology with our customers and would like to make the technology available through customer partnerships as well as product and service offerings," he says. "We expect that SII will facilitate innovative new methods of business collaboration sensitive to privacy and regulatory issues." **56115**

Robb is a Computerworld *contributing writer in Los Angeles.*

HOW MANY PEOPLE DOES TO SUPPORT A SINGLE (THAT'S TOO MANY.)



With IBM® Express Servers and Storage™ designed for mid-sized businesses, help is here.

Servers should support a business, not the other way around. That's why IBM Express Servers have self-managing features: so that our servers can virtually run themselves. What's more, with IBM Express Servers and Storage, innovation comes standard. Take the OpenPower™ 710 Express, for instance. It's specially tuned for Linux® and offers the reliability of POWER5™ technology at a surprisingly low price.[1]

And while you can't be in two places at the same time, you might want to look into the innovative server feature that can. For example, the remarkable Advanced POWER™ Virtualization option – it lets one OpenPower 710 Express act as many virtual ones.

On top of that there's IBM TotalStorage® products, which offer a wide range of disk, tape, and storage software solutions – so you can choose the right options to meet the growing needs of your company.

There's also one more great feature – your IBM Business Partner. Which means you can talk to someone who understands your industry and your business – and who's located in your neck of the woods. And for mid-sized businesses, that's really big help in a really big way.

IBM eServer™ OpenPower™

Tuned for Linux

IBM eServer **OpenPower 710 Express**

System features

- Increase computing power, availability and scalability in a rack dense environment
- Ideal for consolidation of infrastructure workloads (Web serving, file, print, security applications)
- Robust 64-bit mainframe-inspired POWER5 systems
- 2-way 19" rack server
- Up to 32GB of memory
- Optional Advanced POWER Virtualization[1]
- DB2® Express Discover CD
- Limited warranty: up to 3 years on-site[2]

From **$4,477***

IBM Financing Advantage
Only **$124** per month[3]

*All prices stated are IBM's estimated retail selling prices that were correct as of May 6, 2005. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Offers are for business customers only and are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. [1]The Linux operating system for the OpenPower 710 Express must be purchased separately. Price does not include virtualization option. [2]Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. [3]IBM Global Financing terms and conditions, and other restrictions may apply. Monthly payments provided are for planning purposes only and may vary based on customer credit and other factors. Rates and offerings are subject to change, extension or withdrawal without notice. [4]Customer Replaceable Unit (CRU) service is available in most

IT TAKE SYSTEM?

IBM

IBM TotalStorage®

Simplify storage management to improve productivity

IBM TotalStorage **3580 Express**

The 3580 Express helps address your growing storage requirements and the problem of shrinking backup windows. It supports cost-effective backup, save and restore, and data archiving.

System features

- Built on Ultrium® 3 technology
- Read/write compatible with cartridges written by Ultrium 2 drives
- Read compatible with Ultrium 1 cartridges
- Up to 400GB cartridge capacity. Up to 800GB with 2 to 1 compression
- Limited warranty: 3 years[4]

From **$5,850***

IBM Financing Advantage
Only **$167** per month[3]

IBM TotalStorage **DS4300 Express**[5]

With a scalable design, the DS4300 Express is designed to provide a reliable and affordable storage option to help simplify your data management needs.

System features

- 2GB Fibre Channel SAN-ready
- 3U rack mount entry level
- Scales to 33.6TB
- Supports up to 112 Fibre Channel disk drives – with optional EXP710 expansion units[6]
- Heterogeneous OS support
- Limited warranty: 3 years on-site[7]

From **$8,655***

IBM Financing Advantage
Only **$238** per month[3]

☎ THE WORLD'S HELP DESK

Learn more about our full range of IBM Express products. And find the IBM Business Partner near you - who is IBM trained to know which systems meet your specific requirements.

ibm.com/eserver/helpishere2

1-800-IBM-7777

mention 104CE02A

SIZE OF BUSINESS

HELP FOR ANY SIZE PROBLEM

countries. [5]General product availability of IBM TotalStorage DS4300 Express is expected to be 6/17/05. [6]EXP710 expansion unit is not included in the price. MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers for storage capacity are given in native mode followed by capacity using data compression technology. IBM, eServer, POWER5, OpenPower, IBM Express Servers and Storage, DB2, POWER and IBM TotalStorage are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Linux is a registered trademark of Linus Torvalds in the United States and other countries. Linear Tape-Open, LTO, and Ultrium are trademarks of Certance, HP and IBM in the U.S. and other countries. Other company, product, and service names may be trademarks or service marks of others. ©2005 IBM Corporation. All rights reserved.

PUBSUB CONCEPTS' PROSPECTIVE SEARCH

Search Tool for Tomorrow

Search engine speeds through millions of Internet pages for user-requested news as it happens. **BY DREW ROBB**

IMAGINE A SEARCH ENGINE that doesn't deal in the present but watches the future. It doesn't delve through events that have happened; it gazes beyond the present to know what will happen and alert you to it. While PubSub Prospective Search by PubSub Concepts Inc. in New York doesn't go quite that far, the company has come up with a clever capability.

"Today's traditional search model is based upon retrospective search, meaning information which is already out there and available to one of the major search engines," says Bob Wyman, chief technology officer and PubSub co-founder. "Prospective Search looks for future information on a given subject."

PUBSUB CONCEPTS INC.
www.pubsub.com

PRODUCT: PubSub Prospective Search

KEY DEVELOPERS: Bob Wyman and Duncan Werner

In reality, though, it's far from crystal-ball gazing. It's like telling a search engine, "Let me know as soon as there's more information on *x*." Prospective Search stores users' queries and matches them against new information as it comes out.

"In the past, you browsed, whereas now you can gain access as new material appears," says Charlene Li, an analyst at Forrester Research Inc. "It requires a change in the way people look at information — like having a concierge service for information you want to see that comes up in the future."

This notification service is made possible by PubSub's proprietary "matching engine," which can match published data against stored queries in real time. The speed of the matching engine, at more than 3 billion matches per second, provides the foundation for an Internet-scale search service.

Wyman was the product's primary inventor, and the key developer was Duncan Werner, vice president of engineering. Angel funding of $2.5 million was enough to get the project started. The product was developed with the realization that more and more Internet information will be published or pushed as feeds using XML standards such as RSS and Atom. Following the definition of the core algorithms, the matching engine was developed as a component in C++.

"The challenge became, what topics available as published feeds on the Internet would be of interest to users?" says Wyman. "It then became apparent that weblogs, or blogs, were growing rapidly and could provide published data on a large scale."

Prospective Search's matching service continuously reads more than 13 million blogs, over 50,000 newsgroups, all Securities and Exchange Commission EDGAR filings, press releases from major wire services, earthquake data from the U.S. Geological Survey, and Federal Aviation Administration airport delay information to instantly alert users whenever items of interest appear. More topics and sources are being added to broaden the appeal of the service.

Yet according to Marc Strohlein, a content software technology analyst at Outsell Inc., a Burlingame, Calif.-based research firm, all those data sources are still not quite enough. "PubSub is not yet as comprehensive as other services such as Intelliseek or Fast Search & Transfer, and users don't have the ability to select sources," says Strohlein. "But PubSub is a lot faster at finding stuff, and it is free compared to big fees for using some of these other services."

The product has been thoroughly tested in the real world. Prospective Search is available on PubSub's Web site as a free service and boasts more than 200,000 subscribers. Now the big test is how to turn it into a working business model.

"Once Prospective Search is established and has a critical mass of users, the service will be monetized through the insertion of ads into the subscription results," says Wyman. "Secondly, Prospective Search can be provided to media Web sites as a way to establish a much more relevant relationship with their users. 'Powered by PubSub' relationships will be monetized through a service fee or a share of relevant advertising revenue." **56119**

Robb is a Computerworld *contributing writer in Los Angeles.*

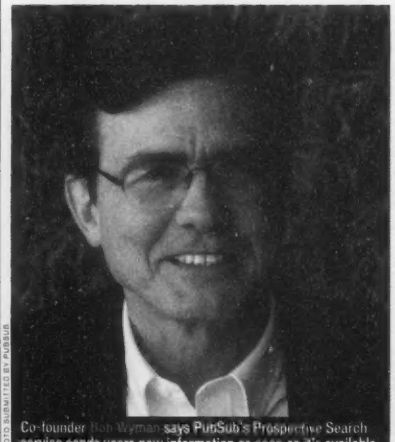


PHOTO SUBMITTED BY PUBSUB

Co-founder Bob Wyman says PubSub's Prospective Search service sends users new information as soon as it's available.

Horizon Awards Panelists

COMPUTERWORLD HORIZON AWARDS 2005

Horizon Award nominations were also collected from a panel of expert "scouts," who alerted us to unique technologies in the field. Information collected in those nominations was then sent to a panel of 10 judges, who reviewed and scored the candidates. Based on those evaluations, *Computerworld* chose eight Horizon Award winners and 20 honorable mentions. Special thanks go to our five scouts and 10 judges, who helped find and evaluate the winning technologies featured here.

Scouts

A panel of industry experts alerted us to technologies on the horizon. They are:

- **Leonard Kleinrock,** professor, UCLA
- **Jerrold Grochow,** vice president for information services and technology, MIT, Cambridge, Mass.
- **Gus Tai,** general partner, Trinity Ventures, Menlo Park, Calif.
- **David Pensak,** former research fellow, Du Pont Co.
- **Jeff Wacker,** fellow/futurist, Electronic Data Systems Corp., Plano, Texas

Judges

A panel of IT executives helped evaluate dozens of technologies. They are:

- **Yuri B. Aguiar,** senior partner, chief technology officer, Ogilvy & Mather Worldwide, New York
- **Joe Drouin,** vice president and CIO, TRW Automotive Holdings Corp., Livonia, Mich.
- **Tony F. Fuller,** vice president of IT/chief technology officer, Rent-A-Center Inc., Plano, Texas
- **Christopher A. Graham,** vice president and CIO, Church Mutual Insurance Co., Merrill, Wis.
- **Gerhard W. Karba,** vice president and CIO, Hines Interests LP, Houston
- **Lyn McDermid,** senior vice president and CIO, Dominion Resources Services Inc., Richmond, Va.
- **Herman Nell,** senior vice president and CIO, Fiskars Brands Inc., Madison, Wis.
- **Rob Rennie,** vice president technology and CIO, Florida Community College, Jacksonville
- **Troy D. Thomas,** executive vice president, enterprise management services, KeyCorp, Cleveland
- **Stova Wong,** CIO, Paul, Hastings, Janofsky & Walker LLP, Los Angeles



22 million

split-second securities trades a day for three of the world's leading investment firms.

Huge order volumes are executed swiftly and securely across platforms around the globe. It all happens when CA software automates systems and processes. To manage your customers' transactions with this kind of speed and reliability, call a CA representative at **1-888-423-1000** or visit **ca.com/didyouknow**.

Simplify
Automate
Secure

Computer Associates®

© 2005 Computer Associates International, Inc. (CA). All rights reserved.



Offer valid on 2-year Customer Agreement with qualifying voice plan.

Don't be limited by Wi-Fi hotspots. Enjoy the freedom of Verizon Wireless BroadbandAccess, the nation's largest fastest wide-area wireless broadband network.

Wi-Fi only works in limited locations, while BroadbandAccess works coast to coast in over 60 metropolitan areas, covering over 140 million Americans. And unlike Wi-Fi, BroadbandAccess has wide-area coverage and secure CDMA technology, so you have the freedom to work where it's convenient for you. Connect to the Internet, company intranet, or email and download critical information and access business applications at average speeds between 400–700 kbps. Now you can work when you want, in more places nationwide.

Call our business reps at 1.800.VZW.4BIZ or go to verizonwireless.com.

Teamed with Lucent Technologies

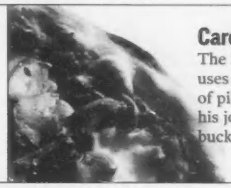
Our Surcharges (incl. 2.18% Federal Universal Service (varies quarterly), 5¢ Regulatory/line/mo., & others by area) are not taxes (details: 1-888-684-1888); gov't taxes and our surcharges could add 6%–33% to your bill. Activation fee: $20/2 yrs. IMPORTANT CONSUMER INFORMATION: Subject to Customer Agreement, Calling Plan & credit approval. $175 termination fee, other charges & restrictions. Requires compatible PC card or phone (purchased separately). Offers, coverage & service not available everywhere. Speed claim based on our network tests with 5MB FTP data files, without compression. Actual speeds and coverage vary. Coverage limitations & maps at verizonwireless.com. Limited time offer.

verizonwireless

We never stop working for you.®

You Can't Always Guess What They Want
Until you know what your IT workers are really looking for, you can waste a lot of effort trying to keep them happy. **Page 52**

IT MENTOR
Please Don't Upgrade Me!
Ever wonder why business people aren't always enthusiastic about IT upgrades? IT Mentor Ronald S. Lemos paints a picture from the user's point of view, and it isn't pretty. **Page 56**



Career Watch
The lowdown on a jobs board that uses social networking; the slice of pizza that cost a programmer his job; and where the biggest bucks are made. **Page 58**

HIGH Maintenance

HOW DO YOU MANAGE A SKILLED IT WORKER WHO IS ALSO A SPOILED BRAT?

BY JOHN BRANDON



RED NOSE STUDIO

WHEN the new IT contractor arrived at Tasty Baking Co., he might just as well have had "high maintenance" tattooed on his forehead. In his very first day on the job, he managed to alienate his co-workers with his poor interpersonal skills, solo mentality and penchant for repeatedly misunderstanding assignments.

When Autumn Bayles, CIO at the 1,000-employee Philadelphia-based company, saw a team disaster in the making, she acted fast. She canceled his contract immediately and asked him not to return the next day.

Bayles defines high-maintenance employees as those who feel their knowledge is exclusive or who have eccentricities that lead to bad behavior that they think they can get away with because of their technical ability. But no matter how much value a top performer adds, if the team suffers, he's out.

"There are too many people who have the technical skills we need without the negative traits," she says. "We are happy with a little less technical ability if the person has excellent people skills and no negative attitude."

However you define them, high-maintenance employees challenge even the most seasoned IT managers, and while you can safely jettison some incorrigible employees, others may have skills or experience key to your IT group's success. If you can't live without them, you have to learn how to manage them. And until you do, they can hurt team productivity and morale.

Some would say the idea of a high-maintenance top performer is an oxymoron. "The idea of a top performer is a complete package of top technical competence and on-the-job behavior," says Cushing Anderson, a corporate learning and performance analyst at IDC in Framingham, Mass.

But all too often, Anderson sees managers hire for technical prowess and then live with poor behavior. He says that letting an employee get away with negative behavior leads to high maintenance, so he recommends an aggressive approach: changing an employee's role, starting disciplinary action early or even providing time off so the employee can address the problem.

Greg Valdez agrees that the key to managing high-maintenance employees is to quickly deal with the problems they create.

Valdez, an IT director at Intel Corp., says a big problem with high-maintenance workers is that opportunities are lost when a manager focuses his attention on the squeaky wheel rather than on real production. When that happens, "you are treading water," he says. "That's why it's so important to move on these issues before they become critical."

Valdez says that high maintenance and low performance often go hand in hand, and correcting one problem typically helps resolve

the other. He encourages a high level of personal commitment from employees. Each employee should own and enjoy his work, he says, which means the manager must make sure square pegs aren't being forced into round holes. He also pays performance bonuses to employees who work well in their teams.

Valdez encourages his managers to promote a healthy work-life outlook, meaning no one should live at work. Employees who spend too much time on the job are almost always the ones who need more management attention, he says.

Goals and Resources

At CNC Global Ltd., a consulting firm in Toronto, CIO Andrew Dillane has found that goal-setting helps high-maintenance employees focus on the positive. He also makes sure they have access to the resources they need for their jobs, and he involves each person in the department's overall direction and vision. Each employee should know specifically how he's contributing to that vision, Dillane says.

Even so, he also says that there are times for asking high-maintenance employees tough questions, such as whether they think their contributions to the IT department are meeting expectations. "It's very important to make sure managers are communicating about the employee contribution — that the employee is making a difference," says Dillane.

Bill Brooks keeps high-maintenance problems to a minimum through peer management, good hiring processes and careful communication about company policies and expectations.

Brooks, an IT director at Ingram Micro Inc. in Santa Ana, Calif., is in charge of internal support. He manages about 130 employees who handle about 5,000 calls a day, so high-maintenance employees can affect call volumes and success rates.

Peer management has been particularly effective, he says. It's based on the assumption that employees respond better to other team members than to people in official management positions. Often, this kind of relationship engenders trust, which is just what the high-maintenance IT employee needs, Brooks says.

The technique requires that senior IT employees be given real management responsibility. For example, Brooks tells of a veteran technical support engineer who was approached for information about security issues by a junior employee who was just learning the ropes.

In the past, a top performer might act like a high-maintenance prima donna, withholding information and blocking the junior employee's progress. But as a peer manager, the senior employee responded with an e-mail that said, "I have to commend you for your enthusiasm and efforts in learning more about the security field. Here are a few things I'd recommend." He then listed specific career suggestions and books about IT security, and he offered to help in other ways.

The mentor role focuses the senior employee on the team, so he sees that the team's success is his success, Brooks explains.

Better hiring processes can also help reduce high-maintenance behavior, Brooks says. In the initial stages of hiring, he looks for candidates with a technical foundation mixed with people skills and a team mentality. During a second phase of interviews, the prospective hire sits in with senior-level employees to discuss how the job works. "We give a very realistic preview of the position so no one walks into a role with false expectations," says Brooks.

In the process, those employees also note how comfortably the candidate fits into the team culture, and they assist in the selection process.

Communicating Clearly

Finally, Brooks uses clear communication to help employees understand where they stand in the company and where they're going. "High maintenance occurs when there is no solid career path or when the next level in a career is not discernably different from the previous position," says Brooks. "It can also occur when the manager is not communicating on a regular basis."

And the topics of that communication are crucial as well. "Managers need to catch employees doing something right and praise them, not just point out flaws and problems," he says.

Brooks says no single strategy will solve all of the problems related to high-maintenance behavior. If you want to keep a high-maintenance employee, try a management approach that involves consistent communication, coaching and mentoring combined with swift intervention and disciplinary action when problems arise.

High-maintenance employees will always exist, but how and when you deal with them can make all the difference. **56376**

Brandon is a freelance writer in Buffalo, Minn. Contact him at jbrandonbb@hotmail.com.

EMPLOYEES BEHAVING BADLY

When is a high-maintenance employee simply a challenging part of an IT manager's job and when does his behavior become unacceptable? According to IDC analyst Cushing Anderson, the key is to understand when high-maintenance behavior is temporary and when it's causing long-term disruption.

ACCEPTABLE
Stress caused by an unusual workload
Problems caused by temporary family issues
Inconveniences related to short-term health or drug rehabilitation issues
UNACCEPTABLE
Constant divulging of confidential company information
Inappropriate behavior with other employees
Ongoing, persistent team disruptions

TIPS

- **Hire carefully and include the team** in the decision.
- Don't hire strictly for technical skills; **look for people skills and a team attitude.**
- **Set ambitious goals** to keep employees challenged.
- **Communicate often** about performance and expectations.
- **Don't force square pegs into round holes.**
- **Help employees "own" their jobs.**
- **Give them the tools** they need.
- **Foster teamwork** through peer mentoring.
- **Praise them** when they do well.
- **Reward teamwork.**
- Don't let them live at work. **Send them home.**
- **Don't put off addressing problems.**

KEEP BABY; TOSS BATHWATER

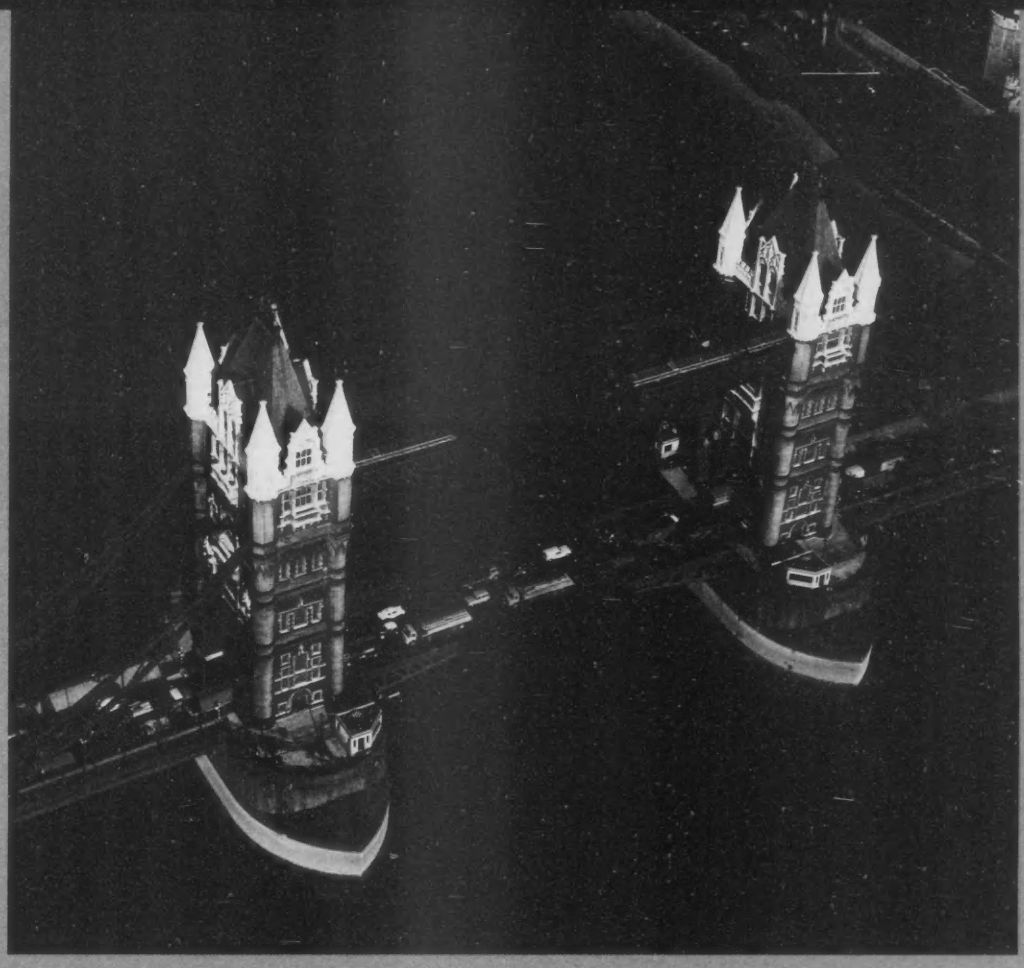
High-performing employees who are also high maintenance are often worth retaining, says Kathi Graham-Leviss, president of XB Coaching Inc., an IT performance coaching company in Portsmouth, R.I.

In her book *High-Maintenance Employees: Why Your Best People Will Also Be Your Most Difficult . . . and What You Can Do About It*, to be published in November (Sourcebooks Inc.), Graham-Leviss makes the case for effectively managing highly skilled but high-maintenance employees, not just dismissing them. Among her suggestions:

- **Develop a plan to motivate high-maintenance top performers by giving them greater challenges.**
- **Set specific goals designed to keep them productive (and less volatile).**
- **Require them to be more accountable for overall team progress than lower-maintenance employees.**

"These employees are highly driven people," says Graham-Leviss. "Put them in charge of a new project or give them the task of creating one, and they will produce. Just make sure that you have another new project waiting for them once their current project ends."

– John Brandon



YOUR JOB IS TO KEEP SYSTEMS AND APPLICATIONS RUNNING. OUR MISSION IS TO KEEP PEOPLE AND INFORMATION CONNECTED. LET'S WORK TOGETHER.

Continuous access to information no matter what. That's Information Availability. It's what your employees, suppliers and customers demand every minute of every day. But to deliver it flawlessly, you need a massive global infrastructure, redundant systems and diverse networks being monitored and supported by skilled technical experts at secure facilities. That's exactly what SunGard provides.

As a result, we can offer you a higher level of availability and save your company, on average, 25%* versus building the infrastructure yourself. Plus, it's a vendor neutral solution that lets you control your data,applications and network while giving you the flexibility to adjust to the changing needs of your business. But best of all, it lets you spend more time solving business problems and less time solving technical problems.

For years, companies around the world have turned to SunGard to restore their systems when something went wrong. So, it's not surprising that they're now turning to us to mitigate risk and make sure they never go down in the first place.

You want your network and systems to always be up and running. We want the same thing. Let's get together. To learn more, visit www.availability.sungard.com or call 1-800-468-7483.

SUNGARD® | Keeping **People** and **Information** *Connected.™*
Availability Services

*Potential savings based on IDC White Paper, Ensuring Information Availability: Aligning Customer Needs with an Optimal Investment Strategy.

Faker!

A surprising number of high-performing executives are just waiting to be exposed as frauds.

A person's strengths are also his weaknesses, says **Manfred F.R. Kets de Vries**. *That's never truer than in the case of a strong performer who feels he's faking it. In the September issue of* Harvard Business Review, *Kets de Vries, director of Insead's Global Leadership Centre in Fontainebleau, France, looks at the neurotic impostor. That's a high-achieving executive who is so convinced he's a fraud that he's in danger of self-destructing — and taking his business along with him. Kets de Vries told Kathleen Melymuka what separates normal self-doubt from neurosis.*



What is neurotic imposture? When you meet an executive, they give you the party line. But I give CEO seminars, and in a seminar, people start to talk about other things — meaningful things, issues and anxieties that they don't talk about to most people. And one thing I hear about repeatedly is the whole issue of feeling like an impostor. When you look at the outside of these people, they're very accomplished, but they're very serious about feeling like impostors. That's the paradox.

Where does this come from? The typical background is a parental situation where they were never good enough, so there is always a lingering doubt. And it's more accentuated in women, especially if they come from a traditional homemaker background or a family where the focus was always on the boys. When these women are successful, there's often an element of self-doubt about their capabilities.

How widespread is it? It's very hard to put a number on it, but it's more common than people think. Among very high achievers, it could be 5% to even 10%. It really comes to a head when a person gets to the No. 1 position and there's no one to talk to. Many executives, particularly males, have so much self-doubt, but they have a hard time talking about their anxieties. There's so much posturing, and they feel they have to keep a mask on. There's so much pretense — pretending to be qualified. Every organization has its particular language, and if I don't understand it, I say so. But many people don't dare to say that, so they keep their mouths shut and that adds to their sense of insecurity.

What are the warning signs that you or a co-worker suffers from this? There are two extremes. One is the slave driver. They are relentless in driving others. Because they have such incredible standards for themselves, they put incredible pressure on others. The other extreme is to become paralyzed.

From time to time, we all feel we have to fake it to make it. How does this differ from the feelings of an actual neurotic impostor? You can bounce back. For them, it doesn't stop. It's relentless — relentless. They're never good enough; they have to do better and better and better. There's also the element of lack of spontaneity and lack of enjoyment, and since you have to be playful to be creative, it affects creativity.

The IT world is full of perfectionists and workaholics. Does that mean it's full of neurotic impostors? I wouldn't go that far. I'm not an IT specialist, but I've worked with quite a few [neurotic impostors] in consulting firms, and many consulting firms specialize in IT. Many of those IT consultants end up as CIOs. I've had some CIOs [in my seminars].

You say neurotic impostors fear failure but they also fear success. That must be crippling. It's a paradox. It's like the doctoral students who do well in all their course work but can't finish their dissertations because people will see how incompetent they are. So it leads to procrastination. But they can also be very abrasive because they want perfection from others. No one can do it as perfectly as they, so they become micromanagers and slave drivers.

Left unchecked, how might neurotic imposture play out in an IT person's career? Not very well. If you're in a larger organization, you have to use people effectively and you have to inspire people, and that's not going to happen. You have a fantasy that if you don't do it, catastrophe will follow. You don't have the ability to let go. It could have a disastrous effect on your career and the organization in general. And the fear of success can cause you to unconsciously shoot yourself in the foot — snatch defeat from the jaws of victory.

How can I, as an IT manager, help a subordinate who appears to be a neurotic impostor? Often they know what's wrong, but they don't do anything about it.

SYMPTOMS OF NEUROTIC IMPOSTURE

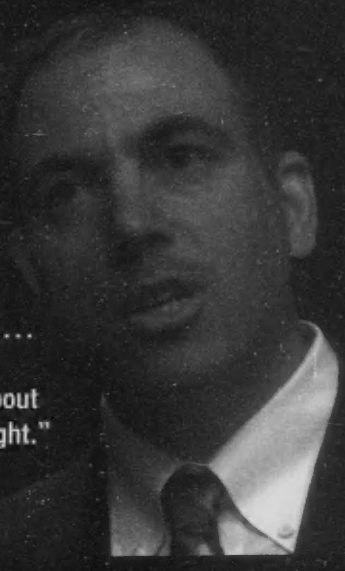
- Fear of failure
- Fear of success
- Perfectionism
- Procrastination
- Workaholism
- Slave driving
- Micromanaging
- Paralysis

It will help if they have a considerate and psychologically minded boss or a person who can play a mentoring role and show some understanding and say that people do make mistakes and we learn from them and no one is perfect. But it's difficult for them, and that might not be enough. In this era, every self-respecting executive has a leadership coach, so it might be helpful to have someone outside to talk to. Or a leadership seminar might help.

What if I'm a high-level IT manager or even the CIO, and I see these symptoms in myself? What should I do? Take my seminar. [Laughs.] Otherwise, it's hard to say. Take on some kind of psychologically trained leadership coach. It's also very helpful to find someone in the organization in a senior position who can play this part — a good HR person should have some insight. But given the paranoia in organizations and the fear that confidentiality might go down the drain, it might be advisable to go outside. **56356**

This is the latest in a series of monthly discussions with Harvard Business Review authors on topics of interest to IT managers.

Trust.



"Computerworld's approach of using real-world testimonies is really the key. If I wanted a vendor opinion, I'd call a vendor up . . . so when I see my peer talking about security challenges and when I see my peer talking about technology innovation, it has much more weight."

Steve Bandrowczak, VP/CIO, DHL Express

COMPUTERWORLD

THE VOICE OF IT MANAGEMENT)))

YOU CAN'T ALWAYS GUESS WHAT THEY WANT

WHAT IT WORKERS REALLY WANT MAY NOT BE WHAT YOU THINK, AND UNTIL YOU FIND OUT, YOU'RE MANAGING BLIND.

BY ALAN S. HOROWITZ

A FAST-GROWING PART of Ken Erdner's IT group was running out of office space, so he moved them into a new area separate from the rest of the department. But Erdner failed to ask the employees what they thought, and that proved to be a mistake. He was going for comfortable and productive; the group felt isolated and resentful.

Luckily, Erdner, vice president of technology and information services at Old Dominion Freight Line Inc. in Thomasville, N.C., communicated well and often with his group, and they made their feelings known.

But his experience points to an IT reality: Managers may think they know what IT workers want, but often they don't. And there's a corollary: If you don't give IT workers what they want, the consequences can be low productivity and high turnover. "There is no acceptable level of turnover if you're losing your best people," says Diane Morello, an analyst at Gartner Inc.

Turnover, not a big problem for the past several years, may be making a comeback as competition for talent heats up. Baby boomers are starting to retire. IT groups are beginning to hire again. U.S. universities are graduating fewer computer science majors, and offshore opportunities are enabling more foreign-born workers — who used to buck up the U.S. IT workforce — to stay in their home countries. As IT workers once again begin to consider greener pastures, it's more important than ever for managers to know what their employees really want.

Get Beyond Money

The first step toward finding out is not to assume you already know. For example, if you think what workers really want is more money, think again.

"I believe that IT too quickly assumes that money is always the No. 1 driver," says Gwen Walsh, a former CIO and now a senior consultant at Ouellette & Associates Inc. in Bedford, N.H. "Money is important, but not necessarily the most important motivator."

In fact, even a bonus can sometimes seem to do more harm than good, as any manager who has ever given a smaller-than-expected one can tell you. "Compensation is more a dissatisfier than a satisfier," says Brian LeClaire, vice president and chief technology officer at health benefits firm Humana Inc. in Louisville, Ky.

Many of the things IT workers actually want are fairly universal desires. For example, they want their jobs to mean something.

"When they leave at the end of the day, [IT workers want to know], Have I made a valuable contribution to the business? Am I involved with projects helping to move the business forward?" says George Hall, senior vice president for IT human resources at Marriott Corp. in Washington. "Being fulfilled in the role is still the primary driver."

And, like other people, IT workers want recognition, says Christine Bullen, a senior lecturer in information management at Stevens Institute of Technology in Hoboken, N.J. "It sounds simplistic, but there's a need to celebrate successes when people work hard," she says.

Walsh suggests, "Give a party, provide a special trip [to express] sincere recognition for a job well done."

Salt Lake City-based O.C. Tanner Co., which manufactures and distributes employee recognition and performance awards, has a recognition program for its own IT employees that does just that. Awards range from a thank-you e-mail to a choice of gifts, including trips, whose value ranges from about $50 on up.

But IT workers also have wants particular to them. Ann M. Harten, senior vice president and CIO at Sirva Inc., a relocation services provider in Westmont, Ill., did an informal survey of her direct reports and found that they wanted the security of knowing that they would not be outsourced, access to new technology and a work schedule that didn't include too many nights and weekends.

Harten's survey also showed that IT workers want to be appreciated by their business customers. "There's a desire to contribute value to the business and to be acknowledged for it," she says.

David C. Berg, senior vice president and CIO at O.C. Tanner, says he suspects that much of the dissatisfaction among IT workers comes from the apparent lack of appreciation from the business side. "The business must appreciate IT employees [and not] see IT as a bottleneck," he says.

It's part of your job as a manager to see that IT's contributions are valued and to communicate that to the rank and file.

Another challenge is that different workers want different things. LeClaire divides IT employees into three broad categories, each of which needs to be engaged in its own way, he says. Some enjoy what they're doing — which is typically focusing on technology — and are mo-

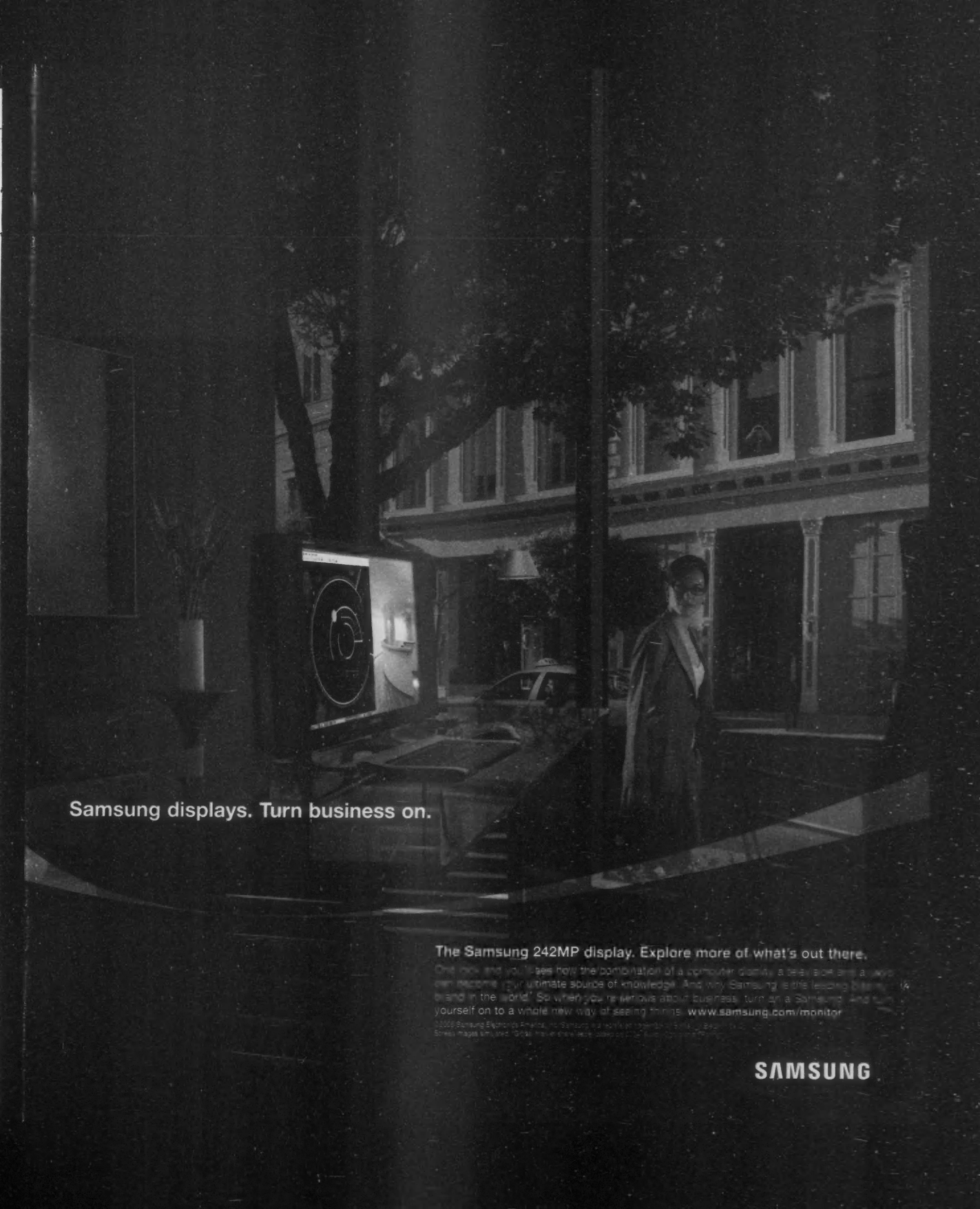
Continued on page 55

NO SATISFACTION

What happens when employees want something – compensation, benefits, technology, security – that you just can't give them? Here are some tips from IT leaders and consultants to help you manage the situation:

- Articulate how you provide a culture and environment the employee won't find in many other companies.
- Stress the career opportunities you provide. Talk about the projects employees get to work on, the people they work with and the opportunities available to them.
- Money isn't everything, but be sure you're paying a competitive wage.
- Try your best to fix the problem.

– *Alan S. Horowitz*


Samsung displays. Turn business on.
The Samsung 242MP display. Explore more of what's out there.
SAMSUNG

EMC²
where information lives



Fr: wrestling with backup issues

To: cooking with gas

"NOBODY ELSE OFFERED A SOLUTION THAT ALLOWED US TO LEVERAGE WHAT WE INVEST TODAY TOWARD OUR FUTURE NEEDS."

Bob Travatello
CIO, Blue Rhino

Blue Rhino is a midsize company that had a king-sized problem. As the #1 brand in propane tank exchange, their information storage needs were growing at 100 percent a year. But their IT budget wasn't. They chose an EMC solution that gave them less downtime, faster backups, and quicker recovery times. The entire package, hardware and software, delivered a high degree of flexibility at an affordable price and allowed them to keep their focus on their customers. Talk to your EMC Velocity™ Partner to learn more about EMC solutions that start simple and stay simple.

EMC VELOCITY™ PARTNER PROGRAM

Read the Blue Rhino profile at www.EMC.com/BlueRhino, or call 866-796-6369 to learn more.

EMC, EMC², [illegible] are registered trademarks or trademarks of EMC Corporation. All other trademarks used herein are the property of their respective owners. ©2005 EMC Corporation. All rights reserved.

Continued from page 52

tivated by the desire to continue as they are. Some are motivated by new and interesting challenges, such as innovative technologies and projects. Others look to a career path in management.

"You engage them not just with technical leadership on projects, but with managerial leadership, and eventually you grow them into managerial positions," says LeClaire.

Hank Zupnick, CIO at General Electric Commercial Finance Real Estate in Stamford, Conn., says he's seen a "diversification of interest" among IT workers. "Some want to be more closely aligned to the business, and others want to remain technically focused," he says.

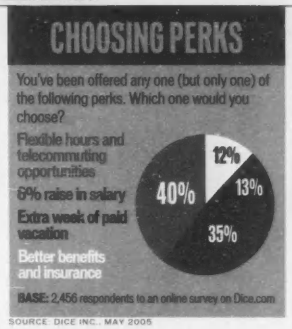
Based on the students she has taught, Bullen believes most IT workers want to advance their careers by moving into management rather than remaining in purely technical jobs. "CIOs have to create a career path up through business projects," she says.

Zupnick adds that over the past 10 or 12 years, he's seen a shift in what IT workers want. Before, 80% or 90% wanted to remain on the technical end, he says. Now only 30% or 40% do; more and more want to move into management.

Erdner has noticed other changes. IT people used to jump from job to job, he says, but now they look for strong companies that will support them over time. "I think IT employees in general are looking more long term," he says.

How do some IT managers know so much about what their employees want? The best way to learn is to ask them, and some companies go to considerable lengths to do that.

Marriott has several programs to keep on top of IT workers' needs. One is a formal survey that looks at variables such as compensation, leadership and the work environment; it has a 90% participation rate. And there are also "town hall" meetings, held at least twice a year, in which leaders talk about strategy, projects and future plans, and employees ask questions and provide feedback. The company also holds a number of "chats" each year in which 10 to 12 employees meet with the CIO and other top managers to talk about issues such as strategy, career development and technology. These employees pass along what they learn to their colleagues. The result of all these efforts is a turnover rate in the single digits and an average tenure of nine years, says Hall.



Zupnick says his IT employees meet twice a year with their supervisors to talk about what they've done and how they envision the future. There are also informal "skip-level" lunches twice a year in which one or two employees meet with a supervisor two levels above them to help the upper-level managers keep in touch.

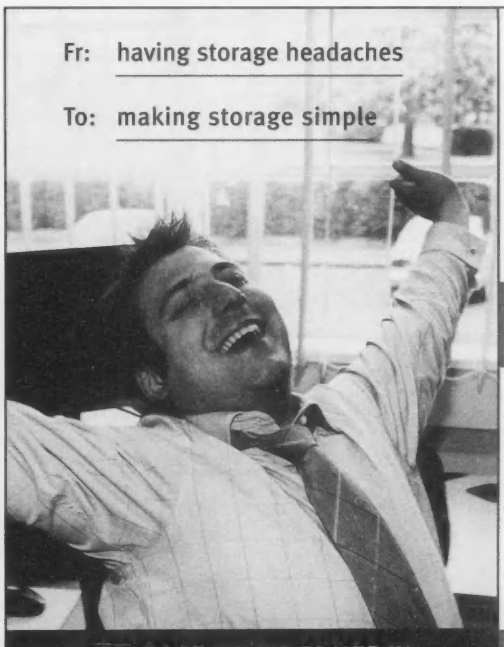
Humana has an ongoing series of performance reviews in which IT employees discuss how well the company is meeting their needs. And through coaching, the company helps them plan and navigate their career paths.

Finding out what motivates employees is the first step toward good management, but everyone needs to remember that job satisfaction is a two-way street. As you attempt to meet workers' needs, they have to recognize their own responsibilities, says Harten. She tells her employees that their part of the bargain is clear: "You have a responsibility to increase your value and worth in the organization." **56358**

Horowitz is a freelance business and technology writer in Salt Lake City. Contact him at alan@ahorowitz.com.

Fr: having storage headaches

To: making storage simple



NOW STORAGE RELIEF COMES IN AFFORDABLE, SCALABLE PACKAGES

EMC²
where information lives®

Whether you need fast backup and complete protection or scalable and easy-to-manage storage consolidation for your midsize enterprise , EMC brings you solutions that are high on results—and simple to use. That's because it's easier than ever to put award-winning software, robust storage, and world-class technical support to work solving your business's critical IT challenges.



EMC CLARiiON iSCSI Solution

Buy for $20,640 — 36 mo $651 Lease*

- EMC® CLARiiON® CX300i IP Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license

EMC CLARiiON Backup Solution

Buy for $22,253 — 36 mo $702 Lease*

- EMC® CLARiiON® CX300 Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license
- EMC Dantz® Retrospect® Multiserver Backup software

EMC CLARiiON SAN Solution

Buy for $24,525 — 36 mo $774 Lease*

- EMC® CLARiiON® CX300 Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license
- 8-port switch

BUSINESS SOLUTIONS FOR MIDSIZE ENTERPRISES

CALL NOW 1-866-796-6369 or visit www.EMC.com/offers.

*Monthly lease amount is based on 36-month Fair Market Value lease, two payments in advance. This offer is valid until December 31, 2005 and is subject to credit approval and final lease documentation. This proposal is based on assumptions regarding the equipment configuration and sale and is subject to change if the configuration, software, services, treasury rates, or sale price changes. Pricing, specifications, availability, and terms of offer may change without notice.

EMC², EMC, CLARiiON, Dantz, Navisphere, Retrospect, and where information lives are registered trademarks of EMC Corporation. All other trademarks used herein are the property of their respective owners. © Copyright 2005 EMC Corporation. All rights reserved. Published in the USA. 08/05

Please Don't Upgrade Me!

A cautionary tale for IT support staff. By Ronald S. Lemos

THERE'S AN OLD joke that goes something like this:

A man receives a new suit from his wife on his birthday. He tries it on, but it doesn't fit well. His annoyed wife says, "Just reach your hand into the sleeve and bend over backwards and bunch the waistband in your other hand. Move your left knee over your right as you walk and you'll be all set." So the man follows those instructions and walks out the door. Two passing ladies see him limping down the street bent like a pretzel. The first lady says, "Oh, do you see that poor, misshapen man?" The other lady says, "Yes, but doesn't his suit fit well!"



IT MENTOR

Sometimes my adventures with technical support make me feel like that man. If you see your own tech support group in the following scenario, rip this out and give it to them.

Technical Support: I have some great news for you. After three years, we've upgraded you from your dull, gray, 300-MHz, 8GB hard drive machine to a shiny, new, black 2.8-GHz, 512MB memory, 80GB hard drive, DVD/CD-RW combo drive, 512MB secure USB 2.0 pen drive, flat-screen machine.

Me: Great, I'm very excited!

(The next day at the office)

Me: The computer is beautiful. But when I tried to insert a Zip disk containing work that I'm doing, I noticed that there is no Zip drive — or floppy drive, for that matter.

TS: Of course not. Your new computer has a built-in DVD/CD-RW combo drive. For moving data, you also have a new 512MB secure USB 2.0 flash drive.

Me: Those are great, but I already had an external DVD/CD-RW combo drive that worked fine for me, and I was doing fine with my Zip disks and even floppies.

TS: USB flash drives are the latest and greatest, and they save money. They've made floppy and Zip drives and disks obsolete.

Me: Yes, but my home computer is a Mac G3 with an internal floppy drive and a Zip drive — same as my old office PC — but there's no USB port for the flash drive. I frequently transport files back and forth. Sometimes I use a floppy disk, sometimes a Zip disk. However, the flash drive won't work on the Mac, and the new PC has no floppy or Zip drive.

TS: You need to ditch that old Mac and get one with USB ports. Or add a USB port, even though that probably doesn't make sense economically. Or you can e-mail small files to yourself from home and open them at work, and for large files, you can set up an FTP site either with your home ISP or with the school and then download to your new office PC.

Me: But isn't my life supposed to be easier with this new machine?

TS: (Silence)

Me: I also notice that you've put the PC tower on floor, not on the hutch on my desk like the old machine.

TS: It's too dangerous to put the machine on the hutch. It could fall in an earthquake.

Me: But now I have to bend down to insert the flash drive in the front USB port.

TS: Didn't you notice that white wire sitting next to your keyboard?

Me: Yes, it looks like a USB cable.

TS: It is! It's a USB extension cable. When you want to use the flash drive, simply plug it in to the extension cable right there next to your keyboard. What could be easier?

Me: Yes, but I noticed that you didn't connect my other peripherals, like my desk camera, printer and scanner.

TS: We didn't set them up because the USB cables aren't long enough.

Me: They were connected before.

TS: Yes, but that was when your machine was on the hutch, which is too dangerous.

Me: But what should I do now?

TS: You could set up the peripherals on the floor.

Me: But that's really not convenient.

TS: Then you need at least three additional USB extension cables — like the one right there that we set up for your flash drive.

Me: Great. When can you bring them to me?

TS: We don't have any extra cables.

Me: Another problem I see is that I have a lot of stuff archived on Zip and floppy disks.

TS: Why?

Me: It's convenient.

TS: You'd be much better off transferring all those files to DVD. It will take less space, everything will be in one place, and DVD media will last longer.

Me: But I can't do that on my new machine, because it doesn't have a Zip or floppy drive.

TS: Well, you'll need to use your home system to transfer all your files to your home CD writer. Then you can transfer those files to your office computer and transfer them to the new DVD drive.

Me: Seems like a lot of trouble.

TS: But you'll be better off.

Me: Getting back to my new computer, I really do need a Zip drive.

TS: No computers are being purchased with Zip drives anymore.

Me: I want a Zip drive.

TS: You could ask your department to purchase either an internal drive, since there's plenty of bay space, or an external USB Zip drive.

Me: For a lot of reasons, including our budget, that's easier said than done.

TS: You could purchase a Zip drive yourself. Since they're obsolete, you could get one pretty cheap.

Me: Will you install the internal drive?

TS: We're not authorized to work on nonstandard configurations. It would probably be best to get an external Zip drive. Also, don't forget to buy another USB extension cable.

Me: How was the decision made on the new baseline PC specifications?

TS: I don't know.

Me: Was there any input from people who are getting the new systems?

TS: I don't know.

Me: Who does know?

TS: I don't know.

(The next day)

Colleague: I see you got a new computer system.

Me: I hate it.

Colleague: But it looks great! 56623

Lemos is a professor of information systems at California State University, Los Angeles. Contact him at rlemos@calstatela.edu.

AT&T and VOIP

Can your network say it's taken the plunge?

NAVIGATE THE FUTURE. When we wanted a deeper understanding of how VoIP can help transform businesses, we volunteered ourselves. Our own VoIP implementation led us to discover a whole new way of doing business—a more efficient and flexible one. The impact—a 12.5% increase in productivity and savings of $180 million annually. As our productivity grew, we continued to expand VoIP, which is now used by 20,000 AT&T employees and growing. When it comes to VoIP, we at AT&T didn't just get our feet wet, we dove in. We can help you do the same. **CAN YOUR NETWORK DO THIS?**



AT&T
The world's networking company®

To find out how AT&T's VoIP experience can benefit your business, go to:
att.com/transform

©2005 AT&T

Career Watch



TAKING THE PROGRAMMER BAIT

Have you heard about the programmer at a mortgage company who availed himself of a slice of leftover pizza after another group's meeting broke up? It cost him his job. That's one of the "You're Fired" stories submitted for a contest that just wrapped up on SimplyFired.com, a Web site operated by Simply Hired Inc. The pink-slipped worker with the most original and humorous story to tell wins a cruise. But the story that caught our eye was the one about the slice of pizza that put the programmer in the unemployment line. It seems that the programmer's co-workers had wanted to take the leftovers home, and when a slice went missing, they went right up the chain of command. The most intriguing aspect of this sad/funny story: Workers at the mortgage company nowadays "refer to unattended pizza as 'programmer bait,' " reports the canned worker. The SimplyFired stories are still on the site. Check them out at your leisure, but be forewarned: One story is from a worker in Cambodia who was fired for spending too much time reading the SimplyFired postings. **56428**

Page compiled by Jamie Eckle.

Konstantin Guericke



TITLE: Co-founder and vice president of marketing

COMPANY: LinkedIn Corp., Palo Alto, Calif.

Q&A

When social networking systems emerged a few years ago, they were primarily geared toward helping people make new acquaintances or find old friends. But with a growing number of people using the systems for business networking, such as searching for sales leads, operators of the networks have begun to target new business services. For instance, LinkedIn recently introduced a service called LinkedIn Jobs, a jobs board that's a bit different from most others, says Konstantin Guericke. He explained what's unique about LinkedIn Jobs to *Computerworld*'s Thomas Hoffman.

Tell me about LinkedIn Jobs. We have 4 million job postings integrated into the system through a partnership we established last month with Simply Hired. It's done mostly through word of mouth. You tend to invite people into the service who are at the same career level as you.

Also, if you're a recruiter who is interviewing candidates for an open position, you might ask questions like, "How do you collaborate with other people? Are you hardworking?" Those answers are hard to discover through an interview. Of course a job candidate is going to tell you they're hardworking. But you can find out more through connections to that person.

What's unique about this service relative to other jobs boards? The No. 1 thing we hear is that people are looking to put their job postings in front of a bunch of employed people and not a lot of unemployed people. If they post on a jobs board, people who aren't actively seeking jobs won't go there.

And the second feature about proactively asking other employees for referrals is very important. There's also independent reference-checking, where each position becomes a pivot search.

So if a job candidate said they worked at RealNetworks from 1999 to 2001, you can check against all other people in the database who worked at RealNetworks during that time to find out more information about that person. And they will be sorted by degrees of separation. You can't do that with standard jobs boards. The candidate can provide you references, but they're all going to say nice things; they're hand-picked by the candidate.

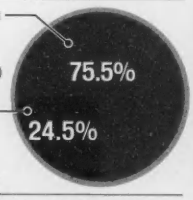
What's the cost of LinkedIn Jobs for recruiters? If you post a listing, it's $95 for 30 days. There's no cost for job applicants.

Climbing The Ladder

THELADDERS.COM INC., an online job-search service for candidates seeking salaries of more than $100,000, has added four new job-search channels, including TechnologyLadder. TechnologyLadder aggregates job postings in software design and engineering. Job seekers pay $25 a month for premium access, and there's no charge for recruiters to post positions.

PROGRAMMERS LOVE THAT CLINKING, CLANKING SOUND

When looking for a job, which is more important to you, money or time off?



SOURCE: TopCoder Employment Services online survey

Best Places, Government Edition

Federal Computer Week in July reported on its survey of the best agencies for federal IT workers. Coming out on top were NASA, the Commerce Department and the Transportation Department. Those on the bottom were the departments of Housing and Urban Development, State and Education.

According to the survey, which polled 602 federal workers who subscribe to the magazine, federal workers like the freedom to innovate on the job and appreciate managers who understand IT. Nearly 70% said they are happy in their jobs. Those who were unhappy in their jobs said they didn't like the constant threat of budget cuts and outsourcing.

Money, Time and Jobs

Maybe those government workers are raking in the big dough. *Money* magazine in July ranked the best places to live in the U.S., and topping the list of places with the highest median household income in 2004 was the Washington suburb of Great Falls, Va. ($165,592). Other top 10 cities in that area were Potomac, Md. (No. 5) and Fairfax Station, Va. (No. 6). Median household income is considerably lower in Cedar City, Utah, at $36,769, but workers there enjoy the fastest commute of the more than 1,300 cities in *Money*'s Best Places database: 10 minutes. Where are the jobs located? The survey pinpoints Castle Rock, Colo., (it's between Denver and Colorado Springs) as enjoying the largest percentage increase in employed persons since 1990: 244%.


IBM Workplace
IBM
IBM® WORKPLACE™ SOLUTIONS PRESENTS
YOU
VS
THE 25-HOUR DAY
FEATURING
ONE EASY-TO-USE ENVIRONMENT.
RELIABILITY & SECURITY.
INCREASED PRODUCTIVITY.
ROLE-BASED ACCESS.
THE UNFETTERED JOY
OF SEAMLESS COLLABORATION.
IT'S SIMPLY A BETTER WAY TO WORK.
IBM MIDDLEWARE. POWERFUL. PROVEN. FIGHT BACK AT WWW.IBM.COM/MIDDLEWARE/PRODUCTIVITY

EVENTS

Application Development

■ **Oct. 6, Detroit**
Sponsor: Compuware Corp.
Topics covered at the OJ.X conference include agile development for Java, mastering complexity in application development, best practices for ensuring Java code quality, performance and security best practices for .Net development, lessons from key Java projects, and how to build secure applications in an insecure world.
www.compuwareojx.com

Symposium/ITxpo

■ **Oct. 16-21, Orlando**
Sponsor: Gartner Inc.
Tracks include operations management, application development, e-government, business intelligence, business process management, collaboration, compliance and risk management, enterprise communication, asset management, mobile and wireless, outsourcing, and servers and storage.
www.gartner.com

Risk Management

■ **Oct. 17-19, New York**
Sponsor: The Conference Board
The 2005 Enterprise Risk Management Conference covers topics such as managing and coordinating risk management roles; Sarbanes-Oxley compliance and ERM value; tools, techniques and approaches for building sustainable ERM programs; the value proposition for ERM; quantitative measurement of operational and strategic risk; integrating ERM into strategy; and integrating ERM with performance management.
www.conference-board.org/conferences

Leadership

■ **Nov. 6-8, Boston**
Sponsor: AMR Research Inc.
The Executive Leadership Conference includes topics such as linking IT to productivity improvement, best practices in driving productivity, the retail revolution, demand-driven supply networks, opportunities and challenges in China, and service-oriented architectures. **www.amrresearch.com.**

BART PERKINS

Executive Sponsors: What They Really Do

AN EFFECTIVE executive sponsor is critical to the success of IT-enabled business programs. Most corporate leaders agree that this person should be the executive receiving the lion's share of the program's benefits. There are widely differing opinions about what the executive sponsor actually does, however. Therefore, they have vastly different roles in different companies.



BART PERKINS is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. He was previously CIO at Tricon Global Restaurants Inc. and Dole Food Co. Contact him at BartPerkins@LeveragePartners.com.

In order to enhance the success of a program, the executive sponsor must provide leadership, especially direction, protection and problem-resolution skills. The most effective executive sponsors perform the following activities, at minimum:

■ **Sponsor the business case.** All major programs need a convincing business case driven by an executive sponsor. The IT staff may need to assist with some preliminary work and data gathering, but the executive sponsor needs to "own" the final version. When it's finished, he must get all of the other stakeholders to support and approve it (in writing).

■ **Get approval to proceed.** The executive sponsor needs to be the primary advocate for the program, presenting the business case to the appropriate audience and securing its funding. Unless the project affects only IT (such as infrastructure upgrades), the CIO should not be the sponsor.

■ **Monitor program progress.** Few executive sponsors are experts at (or actively involved in) day-to-day program management, nor should they be. But someone they trust must be involved actively enough in managing the project to assure them that it is being well run. Typically, the executive sponsor will assign a full-time business manager from his staff to the program, though outside consultants may be used for expertise and objectivity. But the executive sponsor is ultimately responsible for keeping the project on schedule and on budget and achieving its planned benefits.

■ **Chair the program steering committee.** Every major program needs a steering committee to monitor progress, make trade-offs, remove roadblocks and motivate the team. Chairing this committee will ensure that the executive sponsor is close enough to the issues to help the other executives make effective decisions.

■ **Sponsor a risk assessment.** In major business programs, the executive sponsor may commission a project risk assessment. Although the program team frequently views risk assessments as a threat, the real goal should be risk mitigation. The point is not to cancel the project but to protect it. A risk assessment performed by an outside firm can provide an independent perspective and valuable objectivity to help prevent disasters down the road.

■ **Be the cheerleader.** The executive sponsor has to motivate team members and make sure they know that their efforts are valued by upper management. In addition, the executive sponsor needs to promote the program's progress and reaffirm its importance to any critics. This is particularly important when problems occur, which is inevitable in large efforts.

■ **Remove roadblocks.** Roadblocks take a variety of forms, but most are related to resource availability, competing priorities or politics. Business processes may have to be changed. Departmental turf wars may explode. Suppliers may drop the ball. The executive sponsor needs to resolve whatever catastrophe arises so progress can resume.

■ **Assess program deliverables.** As deliverables occur, the executive sponsor will decide whether the predefined acceptance criteria have been met. In addition, he has the final word regarding whether the finished program's overall acceptance criteria have been met.

■ **Capture the benefits.** Unless someone is personally responsible for making sure the program's advertised benefits are actually captured, they may never show up on the corporation's bottom line. For example, many business cases include "reducing costs by eliminating staff." But many programs never deliver. In practice, those staffers are likely to be redirected to other jobs. The most effective approach for holding the executive sponsor accountable for seeing that the proposed benefits are realized is to tie his personal compensation to delivering the benefits.

All these activities are crucial to program success. An executive sponsor who concentrates on only two or three (as many do) leaves the project vulnerable to attack and failure. An effective executive sponsor provides the leverage needed to promote, defend and enhance the success of the business initiative. **56355**

WANT OUR OPINION?
For more columns and links to our archives, go to **www.computerworld.com/opinions**

Rational



IBM



IBM RATIONAL AND TIVOLI® PRESENT

YOU -VS- PRECARIOUS GROWTH

★ FEATURING ★

GROWTH AND INNOVATION DRIVEN BY I.T. ALIGNED WITH BUSINESS GOALS.
AN INTEGRATED APPROACH TO APPLICATION DEVELOPMENT, DEPLOYMENT, MANAGEMENT.

SPECIAL GUESTS

IBM RATIONAL PORTFOLIO MANAGER | THE NEWLY INTEGRATED IBM RATIONAL PERFORMANCE TESTER AND TIVOLI MONITORING FOR TRANSACTION PERFORMANCE

A WORLD-CLASS BOUT FEATURING CAPABILITIES BEYOND MERE MONITORING AND LIMITED TESTING, I.T. LIFECYCLE MANAGEMENT, AND INCREASED EFFICIENCY

IBM MIDDLEWARE. POWERFUL. PROVEN. FIGHT BACK AT WWW.IBM.COM/MIDDLEWARE/LIFECYCLE

IBM, the IBM logo, Rational and Tivoli are registered trademarks of International Business Machines Corporation in the United States and/or other countries. ©2005 IBM Corporation. All rights reserved.

Text 2HELP
Hurricane Katrina Survivors

Donate $5 to support survivors of Hurricane Katrina by texting "help" to 24357 (2HELP). All funds will support the American Red Cross Hurricane Katrina relief efforts.

Your donation will appear on your monthly bill or be debited from prepaid account balances—it's that easy to help make a difference to the thousands of people affected by Hurricane Katrina.

Alltel, Boost Mobile, Cingular, Cricket Communications, Dobson, Sprint and Verizon Wireless are among the carriers supporting this effort.

alltel · boost mobile · cingular raising the bar · CELLULARONE · cricket · Sprint Together with NEXTEL · verizon wireless

American Red Cross

The American Red Cross name and emblem are used with its permission, which in no way constitutes an endorsement, express or implied, of any product, service or company. All text messaging rates will apply. Contact your wireless carrier for applicable rules and regulations.

The Text 2HELP Campaign was coordinated in part by CTIA The Wireless Foundation

Ads Placed Weekly

Didn't find the IT Career Opportunity you were looking for?



Check back weekly for fresh job listings placed by top companies looking for skilled IT professionals like you!

IT|careers
800-762-2977

Senior Software Engineer. Chicago, IL. Responsible for developing Global Architecture toolkits and services. Perform requirements gathering from various development teams and implement solutions that meet the long-term firm strategy. Create technical documentation and training material for GA software. Development of software will involve use of C++, socket programming, database programming, and POSIX threads.

Qualifications include a minimum of a Bachelor's degree in Computer Science, Computer Engineering, Electronics Engineering or a related field, or the foreign equivalent, and at least five years of relevant work experience. Must be proficient with C++, socket and database programming, and POSIX threads.

Qualified candidates should submit a cover letter and resume, job reference R-0027, to: itjobs0027@citadelgroup.com. Principals only need apply. CITADEL IS AN EQUAL OPPORTUNITY EMPLOYER.

Software Engineering and Software QA: Intrado is seeking applicants for software engineering and software quality assurance positions in Longmont, CO. Positions involve software development testing and modification of applications (software engineer) or testing and verifications of product functionality (SQA). All positions require BS in Computer Science, Computer Engineering or related field and at least one year experience. Respond by resume to Human Resources, Intrado, 1601 Dry Creek Dr., Longmont, CO 80503 or hr@intrado.com. EOE.

Livermore Software Technology Corp (LSTC), owner of LS-Dyna, LS-PrePost, LS-Opt, seeks software developers in area of multimaterial Eulerian fluids. Minimum qualification is MS or BS with 1-5 year experience. Please mail resumes to 7374 Las Positas Road Livermore, CA 94550. EOE. No calls.

Cucor US seeks programmer analyst to develop auto software using C and Assembler for airbag control units using CAN bus network environment, CAN level 2 and level 3. Also test and documentation procedures, develop electronic hardware. Require MS or BS-5yr exp. Send resumes to yuryk@cucor.com.

Software Engineer wanted by AS Systems working in Austin to develop S/W on CTI, call center IVP using skills such as TSAPI, TAPI & integration with AVAYA, Nortel switches, embedded system programming. Please send resumes to 9600 Greant Hill Trail, Ste150W, Austin, TX 78759.

Infomerica seeks multiple IT staff: Software Engineers, System Analysts, DBA working at different sites to customize applications using skills per specific project such as Oracle, C/C++, SAP, PeopleSoft, VB, VC++, Java, Web Technology, etc. Minimum MS or BS with 2-5yr exp in IT field. Apply at info@infomericainc.com.

Sr. Software Engineer: McData Corp. seeks applicants for the position of Sr. Software Engineer in Santa Clara, CA. Investigate, design and implement Gigabit Ethernet network driver, IP security chip device driver, Telnet and FTP storage-based switch software. Requirements include master's degree or equivalent (bachelor's degree plus 5 yrs progressive experience) in computer science and working knowledge of IFCP, iSCSI and ISNS protocols, VX Works, network protocols, board bring-up and BSP related experience and Gigabit Ethernet network drivers. Respond by resume to Vikki Schiff, McData, 310 Interlocken Parkway, Broomfield, CO and reference Job #PS091105.

IS CONSULTANT

Bayer CropScience LP located in Research Triangle Park, North Carolina seeks an IS Consultant who independently applies intensive & diversified knowledge of IT in broad areas of assignment. Independently conceives, plans & performs analyses that can have significant influence on technological dvlpmnts. Assists other professionals w/dsgn & implmntn of solutions for novel problems & assesses the feasibility & soundness of proposed approaches & techniques. Provides tech. support for the ongoing dsgn, dvlpmnt, maintenance & operation of the co's enterprise data warehouse & related Oracle applns. Works closely w/co's global IT, IM & business processing depts & selected external IT service providers for activities involving enterprise data warehouse applns. Ensures high quality implmntns for co's enterprise data warehouse applns. Coordinates work of enterprise data warehouse consultants. Leads projects as reqd. Ph.D. in Comp. Sci. or Electrical Engnrg + 2 yrs of exp. in position offered or as a Project Mgr reqd. Must have exp. & skill with the applsn of System Development Life Cycle activities, incl. user requirements gathering, software requirements analysis, software dsgn, software dvlpmnt, software testing, software deployment & software support. Must have exp. with the following technologies: Oracle database management, Oracle PL/SQL, Oracle Warehouse Builder, Oracle Discoverer, Oracle Portal, Oracle Jdeveloper, Oracle Application Server and Java (J2EE and J2SE). Please submit your resume via email by visiting BayerJobs.com and refer to job ID #1363.

Software Engineers for Raymond, NE office. Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP,; Masters or Eqv.** req'd in Computers, Eng, math or related field of study + 1 yr of related exp. (**Eqv: Bachelors or Eqv + 5 yrs of progressive related work exp.). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR. Must have proof of legal authority to work permanently in the U.S. Send resume to HR Manager, Infocross, Inc. 1458 Oak Grove Road, Raymond, NE 68428.

Pomeroy IT Solutions (Philadelphia, PA) seeks Sr. Network Analyst with BS or equiv. in CS or a related field + 2 yrs. Exper. Must have experience using Microsoft SMS Server, SQL Server, Data Warehousing, and LAN/WAN Infrastructure. Send resume to: knelson@pomeroy.com with SNA1 in subject heading. No calls. EOE.

Software Engineer for New York, NY office. Design & Develop software using Oracle, J2EE, Sybase, XML, UML, Coolgen, Interwoven, Winrunner, Test Director and Crystal reports. Masters or Equivalent** req'd in Computers, Engineering, math or related field of study + 1 yr of related exp. (**Eqv: Bachelors or Eqv + 5 yrs of progressive related work exp.). 40 hrs/Wk. Must have legal authority to work permanently in the US. Contact HR, Diamlink, Inc, 1200 Ave of Americas, 3rd Floor, New York NY 10036.

User Centered Designer. Chicago, Illinois. Plan and provide usability services for a large intranet development team using knowledge of software development. Create User Centered Designs (UCD) and provide UCD techniques. Conduct user and task analysis. Develop and implement recommendations to address observed usability problems. Design new or improved existing user workflow within applications. Translate high-level concepts into user workflow. Deliver test results and recommendations to development teams. Design and build low and high-fidelity prototypes (using tools such as Visio, Visual Basic, or DreamWeaver) to use in usability testing. Evaluate and design effective web sites and web applications.

Qualifications include a minimum of a Bachelor's degree in Human Factors, Human-Computer Interaction, Design or related field, or the foreign equivalent, and at least two years of relevant work experience. Must have experience with User Centered Designs, low and high-fidelity prototyping (using tools such as Visio, Visual Basic, or DreamWeaver), usability testing, and design of web sites and/or web applications. Must have knowledge of software development.

To apply for this position, visit our website at http://careers.jpmorganchase.com/ click "Employment Opportunities" then click "Search and Apply for Jobs" then click "Job Search" and then in the "Keyword and Job Number Search" field enter #050031760. JPMorgan Chase is an Equal Opportunity and Affirmative Action Employer. M/F/D/V.

Fixed Income Developer. Chicago, IL. Responsible for writing and maintaining real-time business applications in C++ on Linux for use within the Fixed Income business suite. Responsible for learning the existing suite of applications that are used on the desk, understanding their architecture and analytics, and taking over the support and development of these applications. Develop and deploy next generation applications and tools for fixed income to support the MBS, Government and FX trading systems.

Qualifications include a minimum of a Bachelor's degree in Computer Science, Engineering or a related quantitative field or the foreign equivalent. Must have three (3) years of relevant experience. Must have prior experience utilizing C++ in Unix/Linux environment.

Qualified candidates should submit a cover letter and resume, job reference R-0028, to: itjobs0028@citadelgroup.com. Principals only need apply. CITADEL IS AN EQUAL OPPORTUNITY EMPLOYER.

Programmer Analysts (PA) & Software Engineers (SE) for Dallas, TX. PA: Design, Develop software using Oracle, Erwin, XML, C++, Interwoven, Coolgen, ClearCase, ClearQuest, PVCS, UNIX; Bachelors or Eqv. req'd in Computers, Eng, Math or any related field of study + 2 yrs of related exp. SE: Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Eqv** req'd in Computers, Eng, Math or related field of study + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Redsalsa Technologies, Inc., 13800 Montfort Dr, Ste.230, Dallas, TX 75240.

Senior Developer. Chicago, IL. Citadel Investment Group, LLC is looking for a qualified candidate to work with various development teams to provide high quality data storage and retrieval solutions for our Portfolio Finance Trading system. Evaluate data feeds and design efficient processes for loading data, and troubleshoot and resolve all aspects of data-related problems. Address data architecture, database administration, storage management, backup and recovery, performance monitoring and tuning, and database integrity and security. Analyze large-scale data sets with a focus on the creation and automation of statistical models, which will leverage data sets for the prediction of financial and economic variables. Extract, transform and analyze data sets as needed by the trading desk, generate reports and analyses of key empirical findings, and transform ad-hoc analyses into efficient and repeatable analytic processes and procedures.

Qualifications include a minimum of a Bachelor's degree in Computer Science, Computer Engineering, Mathematics, or related field, or the foreign equivalent, and at least three years of relevant work experience. Must have previous project management and database (data modeling, RDBMS) experience. Must have knowledge of C++, Perl, Unix shell scripting, and data warehouse concepts. Must also have knowledge of portfolio finance.

Qualified candidates should submit a cover letter and resume, job reference R-0026, to: itjobs0026@citadelgroup.com. Principals only need apply. CITADEL IS AN EQUAL OPPORTUNITY EMPLOYER.

Senior Associate, Business Analyst. Chicago, IL. Work with business groups to identify solutions to business issues. Complete business and functional requirements documentation using VISIO. Draft use cases and use case diagrams using RUP, Rational, and/or similar programs. Work with quantitative research and trading groups in constructing tools, analyzing data and crafting business process flows using statistical programs such as Excel and Matlab, and analyzing system and process inventories. Draft test cases and test plans.

Qualifications include a minimum of a Bachelor's degree in a computer science or an engineering related field, or the foreign equivalent, and at least five years of relevant work experience. Must have previous project management and testing experience. Must have experience with VISIO as well as with statistical programs such as Excel and Matlab. Must have experience with RUP, Rational, and/or similar programs.

Qualified candidates should submit a cover letter and resume, job reference R-0025, to: itjobs0025@citadelgroup.com. Principals only need apply. CITADEL IS AN EQUAL OPPORTUNITY EMPLOYER.

Software Engineers required for Caseyville, IL. Design, Develop, Test, Implement, Maintain and Coordinate Installation of software applications using Oracle, SQL Server, Erwin, Sybase, XML, UML, Interwoven, Coolgen, ClearCase, ClearQuest, Plumtree, PVCS. Masters or Equivalent* req'd in Computers, Eng, + 1 yr of related exp. (*Eqv: Bachelors + 5 years of progressive related work exp). Must have legal authority to work permanently in the U.S. Send Resume to HR, Caseyville Hotels Investors LLC, 2423 Old Country Inn Dr, Caseyville IL 62232.

APPLICATIONS SUPPORT SUPERVISOR
($5,113 - $6,852/month)

Requires a BS + 5 years experience in analysis & programming of municipal business systems, including 2 years direct supervision of programming staff. Apply by 9/30/05 City of Ventura (805) 658-4777 or www.ci.ventura.ca.us. EEO.

Computer Professional NY based IT firm: IT Manager, MIS Manager needed to plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systemsanalysis, and computer programming. Apply with 2 copies of resume to Payless Enterprises Inc 252 W. Old Country Road, Hicksville, NY, USA-11802.

Programmer Analysts: Analyze, Configure & Integrate multi-tier Enterprise Applications such as Siebel or Oracle Applications using native tools and/or other Data Integration tools such as Informatica, Business Objects, PL/SQL and DTS packages. Work with Oracle, SQL Server, Sybase and/or DB2 in Relational and Datawarehouse environment. Need B.S in Comp. Sci. or Engg. or related & 2 yrs of exp. Send resume to H.R. Lingtech Co. USA, 2990 Richmond Ave., Ste. 660, Houston, TX 77098.

Software Engineers: needed w/relv. degree & exp. Analyze, design, develop & deploy business applications by utilizing some of the following or combination thereof. Analyze, design, develop & deploy business applications by utilizing some of the following or combination thereof: C, C++, Java technologies, Oracle databases, Sybase, DB2, Windows envrmts., Solaris, Linux, XML/XSLT, UNIX, ASP, CORBA, Coolgen, Websphere/Weblogic/MQ Series. Top $. Mail resume to: Technofina, Inc., 480 Congress St., Portland, ME 04101.

SYSTEMS ANALSYT - Needed w/relv. Bachelor's & min. 2 yrs. exp. to research, analyze, design, develop, implement, software/hardware reqmts. Top $. Mail resume to: Wings Manufacturing Corporation, 170 Lafayette St., Jersey City, NJ 07304.

Programmer Analysts: Develop, configure, analyze, design customize Software applications using C, Unix, GUI, Visual Basic, .Net, J2EE, LabView, SAP, Oracle Applications, Sybase. Req. BS in Comp. Sci. or Engg. or academic equiv. Send resume to: HR. Infodat International, Inc. 9700 Richmond Ave., Ste. 160, Houston, TX 77042.

IT Managers for (Exton) PA IT firm to plan, direct, coordte activ's in as electronic data processing, infor'n sys, sys analysis, comp progmng. Dsgn, dvlpt & testing of bus. s/ware appli'ns. Specific exp. in working w/ offshore clients/projects. Apply w/ 2 copies of resume to HRD, Masters Information Technology, Inc., 250 Autumn Dr, Exton, PA 19341.

Exp. Software Eng to design/implement system using Clarion/Java/Xml/Sql. Refs reqd. Send resume: H. Resources 6363 NW 6th Way Ste 425 Ft Lauderdale FL 33309.

Quality Assurance Testing Specialist needed in Wichita, KS to manage high-level dsgn & testing on all cross-product projects using SoftBrands S/ware Products PORTfolio, Internet based products, RIO, Leisure Mgmt, Landmark, IGS Worldwide, Medallion, PowerBuilder & Win Runner; provide domain expertise relative to Hospitality products incl timeshare resort solutions & industry stds; manage activities of staff. Resume to: SoftBrands Hospitality, Two Meridian Crossings, #800, Minneapolis, MN 55423.

Accurum, a Kanbay Company headquartered in Jersey City, NJ is seeking experienced Client Engagement Managers (ref. #14CEM), Project Managers (ref.#14PM), and Lead Consultants (ref.#14LC) to oversee software consulting projects throughout the country. Also seeking Technical Architects (ref.#14TA), Sr. Consultants (ref.#14SC) and Assoc. Consultants (ref.#14AC) to design, develop, test and implement business systems software applications. Email resume to: resumes1@kanbay.com and reference appropriate job#. No calls. EOE.

Marketing Analyst (Hicksville, NY): Analyze profitability of IT projects/JVs, equity, purchases or mergers. Perform cost benefit analysis of ops & market potential. Determine demand for services in East/West Coasts, Canada, Europe/Middle-east/North America. Mrktng exp w/ 2 yrs. Reply w/ 2 copies of resume: Payless Enterprises, 252 Old Country Road, Hicksville, NY 11801.

PROGRAMMER ANALYSTS

Enternet Business Systems, Inc. (Edison, NJ) seeks programmer analysts to develop, design, analyze and implement data warehousing and web based applications by utilizing Cognos, Unix, Linux, Oracle, ASP, Java, SQL Server,JNDI, JDBC, Visual Basic, JDBC, and UDB DB2 8.1. Candidate must prepare program specifications, and perform integration testing. Please apply with 2 copies of resume to HRD, Enternet Business Systems, Inc., 100 Plainfield Ave, #3, Edison, NJ 08817.

Business Development Mgr: Commercial & Technical support activities for company in LA & Caribbean; Support all primary UPS product lines, incl 3-phase models. 8 yrs exp working with Power Integrators required. English, Portuguese & Spanish. BA/BS or equiv in CS. Fax resume to 773-869-1325 Attn: Michelle @ Tripplite, 1111 West 35th Street, Chicago, IL 60609.

Software Engineers for Raleigh, NC. Design, Test & Implement software applications using C, C++, XML, Delphi, ASP, Coolgen, Interwoven, Oracle, PL/SQL, Developer 2000 & Designer 2000; Masters or Equivalent** req'd in Computers, Engineering, math or related field of study + 1 yr of related exp. (**Eqv: Bachelors or Eqv. + 5 yrs of progressive related work exp.). 40 hrs/Wk. Must have legal authority to work permanently in the US. Send resume to HR, Matrix Technologies, Inc. 3109 Poplar Wood Court, # 217 Raleigh, NC 27604.

ATTENTION:
Law Firms
IT Consultants
Staffing Agencies

Place your Labor Certification ads here!

Are you frequently placing legal/immigration advertisements? Let us help you put together a cost effective program that will make this time-consuming task a little easier.

Contact:
800-343-6474 Ext 8127
IT|careers

Top 10 reasons why you should advertise your recruitment message with IT Careers.

IT Careers Audience Skill Survey 2003/2004

• Client Operating Systems	93%
• IS/MIS/IT	87%
• Server/Host Operating Systems (NET)	84%
• Windows 2000	80%
• LAN/WAN Environment (NET)	73%
• Languages & Tools (NET)	72%
• Windows NT	72%
• Dev. Tools/Environments	68%
• Software/Applications Dev.	67%
• Networking/Telecom	66%

Your direct line of communication to qualified IT Professionals with the most in-demand IT skills.

IT|careers

800-762-2977

Visit us online at www.itcareers.com

CW091205EAMW.2

COMPUTERWORLD HEADQUARTERS

One Speen Street, P.O. Box 9171
Framingham, MA 01701-9171
Phone: (508) 879-0700
Fax: (508) 875-4394

PRESIDENT/PUBLISHER/CEO
Matthew J. Sweeney
(508) 271-7100

EXECUTIVE ASSISTANT TO CEO/ CORPORATE COMMUNICATIONS MANAGER
Laureen Austermann
(508) 820-8522

VICE PRESIDENT/ GENERAL MANAGER ONLINE
Martha Connors
(508) 620-7700

VICE PRESIDENT/MARKETING
Matt Duffy
(508) 820-8145

EXECUTIVE VICE PRESIDENT/ STRATEGIC PROGRAMS
Ronald L. Milton
(508) 820-8661

VICE PRESIDENT/ONLINE SALES
Gregg Pinsky
(508) 271-8013

VICE PRESIDENT/ HUMAN RESOURCES
Piper Sheer
(508) 820-8162

EXECUTIVE VICE PRESIDENT/COO
Matthew C. Smith
(508) 820-8102

VICE PRESIDENT/ EDITOR IN CHIEF
Don Tennant
(508) 620-7714

VICE PRESIDENT/CIRCULATION
Debbie Winders
(508) 820-8193

CIRCULATION
Sr. Circulation Specialist/Diana Turco, (508) 820-8167

PRODUCTION
Vice President Production/Carolyn Medeiros; Production Manager/Kim Pennett; **Print Display Advertising:** (508) 820-8232, Fax: (508) 879-0446; **DISTRIBUTION:** Director of Distribution and Postal Affairs/Bob Wescott

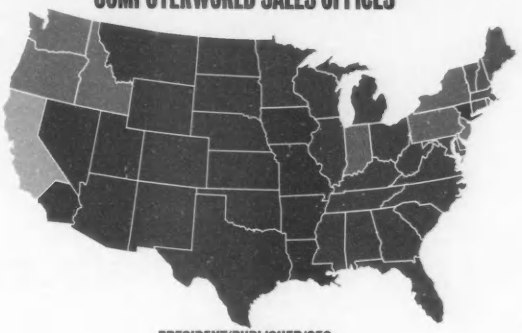
STRATEGIC PROGRAMS AND EVENTS
Vice President Strategic Initiatives/Leo Leger; Vice President Business Development/John Amato; Senior Director, Event Sponsorship Sales/Ann Harris; Vice President, Event Marketing and Conference Programs/Derek Hulitzky; Director, Event Management/Michael Meleedy; Program Director, Computerworld Honors Program/Sandy Weill; Sr. Marketing Specialist/Timothy Johnson; Sr. Marketing Specialist/Matthew Wintringham; Sales Programs Specialist/Colin Longwal; Executive Programs Specialist/Deborah Lee; Custom Events Specialist/Chris Leger; Conference Manager/Nancy Felsheim; Operations Specialist/Chris Johnson; Customer Service Specialist/Mike Barbato; Audience Development Coordinator/Shari Ebb; One Speen Street, Box 9171, Framingham, MA 01701-9171, (508) 879-0700, Fax: (508) 626-8524

ONLINE ADVERTISING
Director of Online Sales/Sean Weglage, (415) 978-3314, Fax: (415) 543-8010; Online Sales Manager, East Coast/James Kalbach, (610) 971-1505; Online Account Executive/Thanh Tu, (415) 978-3309, Fax: (415) 543-8010; Online Account Services Manager/Bill Rigby, (508) 820-8110, Fax: (508) 270-3882; Online Account Services Specialist/Kathryn Goryl, (508) 620-7760, Fax: (508) 270-3882, Online Sales Assistant/Kathy Snow (508) 270-7112; One Speen Street, Box 9171, Framingham, MA 01701-9171, Fax: (508) 270-3882

IT CAREERS ADVERTISING SALES OFFICE
Director of Sales/Laura Wilkinson, (847) 441-8877, Fax: (847) 441-8878; One Speen Street, Framingham, MA 01701

LIST RENTAL
POSTAL: Rich Green, (508) 370-0832, e-mail: rgreen@idglist.com. **E-Mail:** Christine Cahill, (508) 370-0808, e-mail: ccahill@idglist.com. **MAILING ADDRESS:** IDG List Services, P.O. Box 9151, Framingham, MA 01701-9151, Fax: (508) 370-0020

COMPUTERWORLD SALES OFFICES



PRESIDENT/PUBLISHER/CEO
Matthew J. Sweeney
(508) 271-7100
Fax: (508) 270-3882

SALES INTEGRATION DIRECTOR
Laurie Marinone
(508) 628-4823
Fax: (508) 270-3882

NORTHWESTERN STATES
ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306; **ACCOUNT EXECUTIVE:** Coretta Wright (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

BAY AREA
ACCOUNT DIRECTORS: Jim Barrett (415) 978-3306, Sara Culley (415) 978-3307; **ACCOUNT EXECUTIVES:** Emmie Hung (415) 978-3308, Coretta Wright (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

SOUTHWESTERN STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

EASTERN CENTRAL STATES/ INDIANA
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

CENTRAL STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

NEW ENGLAND STATES
ACCOUNT MANAGER: Deborah Crimmings (508) 271-7110, One Speen Street, Framingham, MA 01701, Fax: (508) 270-3882

METRO NEW YORK
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

SOUTHEASTERN STATES
ACCOUNT DIRECTOR: Lisa Ladle-Wallace (904) 284-4972, 5242 River Park Villas Dr., St. Augustine, FL 32092, Fax: (800) 779-8622

ADVERTISER'S INDEX

ADIC www.adic.com 13
AT&T www.att.com 57
CDW Corporation www.cdw.com 71
Computer Associates www.ca.com 45
EMC www.emc.com 54, 55
Global Crossing www.globalcrossing.com 11
GridWorld www.gridworldhome.com 9
Hewlett-Packard Brand www.hp.com 8/9
Hewlett-Packard ProLiant Server www.hp.com 51*
Hitachi www.hitachiyourdata.com 19
IBM IEMS www.ibm.com 15
IBM Software www.ibm.com 59, 61
IBM System Seller Group www.ibm.com 38-39, 42-43
Insight www.insight.com 4
Intel www.intel.com 37*
InterSystems Ensemble www.intersystems.com 28
Juniper Networks www.juniper.net 72
Lenovo www.thinkpad.com 26-27
Microsoft Security microsoft.com/security/it 31, 33
Microsoft Windows Server System microsoft.com/wssystem 2-3
MovinCool www.movincool.com 20
Novell www.novell.com 22-23
Samsung www.samsungusa.com 53
SAS www.sas.com 17
SNW Interoperability & Solutions Demo www.snwusa.com 68
SunGard Availability Services www.sungard.com 49
Sybase www.sybase.com 24/25
Trend Micro Inc. www.trendmicro.com 35
Verizon Wireless www.verizonwireless.com 46
VORTEX www.vortex.net/V5A3 66
Websense www.websense.com 21

*Regional Select Edition

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

INTERNATIONAL DATA GROUP

CHAIRMAN OF THE BOARD
Patrick J. McGovern

CEO
Pat Kenealy

PRESIDENT, IDG COMMUNICATIONS
Bob Carrigan

COMPUTERWORLD is a business unit of IDG, the world's leading technology media, research and event company. IDG publishes more than 300 magazines and newspapers and offers online users the largest network of technology-specific sites around the world through IDG.net (www.idg.net), which comprises more than 330 targeted Web sites in 80 countries. IDG is also a leading producer of 168 computer-related events worldwide, and IDG's research company, IDC, provides global market intelligence and advice through 51 offices in 43 countries. Company information is available at www.idg.com.

IDG

Have a problem with your Computerworld subscription?

We want to solve it to your complete satisfaction, and we want to do it fast. Please write to: **Computerworld, P.O. Box 3500, Northbrook, IL 60065-3500.**

Your magazine subscription label is a valuable source of information for you and us. You can help us by attaching your magazine label here, or copy your name, address, and coded line as it appears on your label. Send this along with your correspondence.

ADDRESS CHANGES OR OTHER CHANGES TO YOUR SUBSCRIPTION
All address changes, title changes, etc. should be accompanied by your address label, if possible, or by a copy of the information that appears on the label, including the coded line.

YOUR NEW ADDRESS GOES HERE: **ADDRESS SHOWN:** ❑ Home ❑ Business

NAME
TITLE COMPANY
ADDRESS
CITY STATE ZIP

OTHER QUESTIONS AND PROBLEMS
It is better to write us concerning your problem and include the magazine label. Also, address changes are handled more efficiently by mail. However, should you need to reach us quickly, the following toll-free number is available: **(888) 559-7327 Outside U.S. call (847) 559-7322.**
Internet address: cw@omeda.com

COMPUTERWORLD allows advertisers and other companies to use its mailing list for selected offers we feel would be of interest to you. We screen these offers carefully. If you do not want to remain on the promotion list please write to the following address – **COMPUTERWORLD, Circulation Department, One Speen Street, Framingham, MA 01701.**

NAME
TITLE COMPANY
ADDRESS
CITY



october 24-26 the palace hotel

VORTEX SF 05

EXECUTIVE PRODUCERS



GEOFFREY MOORE
Co-Executive Producer, VORTEX
Managing Director, TCG Advisors
Venture Partner, Mohr, Davidow Ventures



JOHN GALLANT
Co-Executive Producer, VORTEX
President & Editorial Director,
Network World

OUR INFLUENTIAL, IT-DEFINING SPEAKERS INCLUDE:

- EDWARD AMOROSO, Chief Information Security Officer, AT&T
- SAMEER BADE, VP, Clinical IT Strategies, MedStar
- DAVID BERGEN, SVP & CIO, Levi Strauss & Co.
- SUSAN L. BOSTROM, SVP, Internet Business Solutions Group and Worldwide Government Affairs, Cisco Systems
- REBECCA J. JACOBY, Vice President, Customer Service & Operational Systems, Cisco Systems, Inc.
- MARTY CHUCK, SVP & CIO, Electronic Arts
- DAVID L. COHN, Director, Business Informatics, IBM T. J. Watson Research Center
- WILLIAM T. (BILL) COLEMAN, Founder, Chairman & CEO, Cassatt
- NORM FJELDHEIM, SVP & CIO, QUALCOMM
- RYAN GRANARD, CIO, DolphinSearch
- DONALD J. HAILE, Former CIO and Venture Partner, Fidelity Ventures
- ALBERT HITCHCOCK, CIO, Nortel Networks
- ED KAMINS, CIO & Head of Operational Excellence; Senior Vice President, Avnet, Inc.
- ANN M. LIVERMORE, EVP, Technology Solutions Group, Hewlett-Packard Company
- DAVE MARGULIUS, Analyst, Enterprise Insight
- DOUGLAS MERRILL, Senior Director, Information Technology, Google Inc.
- N.R. NARAYANA MURTHY, Chairman & Chief Mentor, Infosys Technologies Ltd.
- RAY OZZIE, CTO, Microsoft
- GREG PAPADOPOULOS, EVP & CTO, Sun Microsystems
- MATTHEW J. SZULIK, Chairman, CEO & President, Red Hat, Inc.
- CHRIS S. THOMAS, Chief Strategist, Director of Strategic Initiatives, Solutions Market Development Group, Intel Corporation
- DAVID WATSON, CTO, Kaiser Permanente

VORTEX: Your opportunity to influence the direction of IT

One room. Two days. Enterprise IT leaders face-to-face with top executives from the world's most prominent technology companies. Add to the mix respected VCs and analysts, and what you have is VORTEX - the only event that brings together all the major stakeholders in the $1 trillion enterprise IT market.

As the key person steering your enterprise, VORTEX is your chance to hear and be heard. Gain candid insight from your enterprise IT peers leading the charge toward IT innovation and be heard by – and influence the direction of – your strategic technology partners.

KEY HIGHLIGHTS OF THIS YEAR'S VORTEX INCLUDE:

- Hear from top CIOs and Enterprise IT executives from **Avnet, DolphinSearch, Electronic Arts, Kaiser Permanente, Levi Strauss, Nortel** and **QUALCOMM** as they discuss and debate how to deliver business value through IT innovation.
- Go behind the scenes as we challenge senior IT executives from companies like **AT&T, Cisco, IBM, Google, Intel,** and **Red Hat** to provide frank answers on their company's strategy in the areas of security, mobility, collaboration, virtualization, Open Source, storage and more.
- In advance of the release of his new book, *Dealing with Darwin,* Geoffrey Moore will provide insight into his groundbreaking Core vs. Context theory and its potential impact on your IT enterprise.

SAVE THE DATE
October 24-26th
San Francisco
and save up
to $700 by
registering today!

Please join us at this year's event and help us set the IT agenda for the year to come.

Register online at www.vortex.net/V5A3 or call 800-643-4668 and ask for Dori Smith.

PLATINUM PLUS SPONSORS: EMC² where information lives® · NORTEL

PLATINUM SPONSORS: A&R PARTNERS · QUALCOMM

GOLD SPONSORS: AT&T · PORTER NOVELLI

Many Minds. Singular Results.

How to Contact COMPUTERWORLD

We invite readers to call or write with their comments and ideas. It is best to submit ideas to one of the department editors and the appropriate beat reporter.

Don Tennant, editor in chief (508) 620-7714

Mitch Betts, executive editor (301) 262-8243

Julia King, executive editor, events (610) 532-7599

DEPARTMENT EDITORS

Craig Stedman, News editor ..... (508) 820-8120

Mike Bucken, assistant News editor ..... (508) 820-8562

Tommy Peterson, Technology editor ..... (508) 620-7729

Kathleen Melymuka, Management editor ..... (508) 820-8118

REPORTERS

Matt Hamblen, networking; mobile/wireless; network/systems management ..... (508) 820-8567

Heather Havenstein, business intelligence; application development; Web services; application server software; health care ..... (919) 388-0391

Thomas Hoffman, IT management and investment issues; careers/labor; energy industry ..... (845) 988-9530

Lucas Mearian, storage; disaster recovery and business continuity; financial services industry ..... (508) 820-8215

Linda Rosencrance, general assignment; transportation and automotive industries ..... (508) 628-4734

Carol Sliwa, Windows; Linux; RFID; retail industry ..... (508) 628-4731

Marc L. Songini, ERP; supply chain; CRM; distribution; food and agribusiness ..... (508) 820-8182

Patrick Thibodeau, enterprise systems; Unix; outsourcing and immigration; antitrust issues ..... (202) 333-2448

Jaikumar Vijayan, corporate security/privacy issues; manufacturing industry ..... (630) 978-8390

Todd R. Weiss, general assignment; open-source community; intellectual property issues; messaging/collaboration ..... (717) 560-5255

OPINIONS

Frank Hayes, senior news columnist ..... (503) 252-0100

FEATURES

Ellen Fanning, special projects editor ..... (508) 820-8204

Robert L. Mitchell, national correspondent ..... (508) 820-8177

Mark Hall, editor at large ..... (503) 391-1158

Gary H. Anthes, national correspondent ..... (703) 536-9233

Julia King, national correspondent ..... (610) 532-7599

COMPUTERWORLD.COM

Martha Connors, vice president/general manager ..... (508) 620-7700

Ian Lamont, online projects editor ..... (508) 820-8187

Sharon Machlis, managing editor/online ..... (508) 820-8231

Ken Mingis, online news editor ..... (508) 820-8545

Marian Prokop, online editor at large ..... (508) 620-7717

David Ramel, e-mail newsletter/online editor at large ..... (508) 820-8269

John R. Brillon, associate art director ..... (508) 820-8216

Dawn Petersen, production designer ..... (508) 820-8131

Michael Weiss, Web producer
Peter Smith, Web development manager
Kevin Gerich, Mark Savory, Web developers

RESEARCH

Mari Keefe, research manager
Cussie Wilson, research associate

COPY DESK

Michele Lee DeFilippo, managing editor/production ..... (508) 820-8126

Bob Rawson, assistant managing editor/production ..... (508) 271-8015

Mike Parent, Monika Sambataro, senior copy editors
Eugene Demaitre, copy editor

GRAPHIC DESIGN

Stephanie Faucher, design director ..... (508) 820-8235

April O'Connor, associate art director
Julie Quinn, senior designer
Susan Cahill, graphics coordinator
John Klossner, cartoonist

ADMINISTRATIVE SUPPORT

Linda Gorgone, office manager ..... (508) 820-8176

CONTRIBUTING EDITOR

Jamie Eckle, Opinions ..... (617) 566-1873

CONTRIBUTING COLUMNISTS

Michael Gartenberg, Dan Gillmor, Paul Glen, Barbara Gomolski, John Halamka, Thornton A. May, David Meschella, Bart Perkins, Virginia Robbins, Bruce A. Stewart

CONTRIBUTING WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb

GENERAL INFORMATION

TELEPHONE/FAX

Main phone number . . . . (508) 879-0700
All editors unless otherwise noted below
Main fax number . . . . . (508) 875-8931
24-hour news tip line. . . (508) 620-7716

E-MAIL

Our Web address is **www.computerworld.com.**
Staff members' e-mail follows this form: **firstname_lastname@computerworld.com.**
For IDG News Service correspondents: **firstname_lastname@idg.com.**

LETTERS TO THE EDITOR

Letters to the editor are welcome and should be sent to: **letters@computerworld.com.** Include your address and telephone number.

MAIL ADDRESS

PO Box 9171, 1 Speen Street, Framingham, Mass. 01701

SUBSCRIPTIONS/BACK ISSUES

Subscription rates: U.S., $99.99/year; Canada, $130/year; Central and South America, $250/year; all others, $295/year
Phone . . . . . (800) 550-7327
E-mail . . . . . cw@omeda.com
Back issues. . . . . (800) 550-7327

REPRINTS/PERMISSIONS

Contact . . . . . Renee Smith
Phone . . . . . (717) 399-1900, ext. 172
E-mail . . . . . reprints@computerworld.com
Visit **www.reprintbuyer.com** to obtain quotes and order reprints online.

COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at **www.computerworld.com.**

ACCESS CO. 8
ACTIVCARD CORP. 8
ADAMS AND REESE LLP 1
ADVANCED MICRO DEVICES INC. 8, 12, 16
AGILITY RECOVERY SOLUTIONS INC. 1
AMAZON.COM INC. 20
AMERICAN RED CROSS 7
AMERITRADE HOLDING CORP. 20
AMR RESEARCH INC. 16, 60
APAX PARTNERS INC. 16
APPLE COMPUTER INC. 21
ARCHIPELAGO HOLDINGS INC. 12
AT&T CORP. 8, 29
BAKER & HOSTETLER LLP 10
BEA SYSTEMS INC. 16
BELL LABORATORIES 29
BT GROUP PLC 36
BURTON GROUP INC. 36
CALIFORNIA STATE UNIVERSITY, LOS ANGELES 56
CATHOLIC HEALTHCARE PARTNERS 1
CENTERS FOR MEDICARE & MEDICAID SERVICES 1
CHURCH MUTUAL INSURANCE CO. 44
CITIBANK 20
CNC GLOBAL LTD. 47
COGNOS INC. 16
COMPIERE INC. 8
COMPUTER ASSOCIATES INTERNATIONAL INC. 18
COMPUTER SCIENCES CORP. 20
COMPUWARE CORP. 60
CONTINENTAL AIRLINES INC. 24
CONTINENTAL EMPATCH LLC 16
CULLEN/FROST BANKERS INC. 16
DEFENSE ADVANCED RESEARCH PROJECTS AGENCY 40
DELL INC. 8
DIGIUM INC. 8
DIXONS GROUP PLC 8
DOLE FOOD CO. 60
DOMINION RESOURCES SERVICES INC. 44
DU PONT CO. 44
EBAY INC. 20
EEYE DIGITAL SECURITY INC. 10
ELECTRONIC DATA SYSTEMS CORP. 44
ELEMENTAL SECURITY INC. 36
ENTERPRISE MANAGEMENT ASSOCIATES 29
FAST SEARCH & TRANSFER ASA 44
FBI 7
FEDERAL AVIATION ADMINISTRATION 44
FEDERAL EMERGENCY MANAGEMENT AGENCY 70
FEDERAL TRADE COMMISSION 30
FISKARS BRANDS INC. 44
FLEETBOSTON FINANCIAL CORP. 20
FLORIDA COMMUNITY COLLEGE 44
FORRESTER RESEARCH INC. 36, 44
FOUR LOOP TECHNOLOGIES LLC 8
FROST & SULLIVAN LTD. 30
GARTNER INC. 1, 8, 10, 14, 20, 24, 34, 52, 60
GENERAL ELECTRIC COMMERCIAL FINANCE REAL ESTATE 52
GOMCUS GMBH 14
GOOGLE INC. 8, 20, 36
GRISOFT SRO 14
HEALTHCARE INFORMATION AND MANAGEMENT SYSTEMS SOCIETY 1
HEWLETT-PACKARD CO. 8, 12, 14, 16
HINGE INTERESTS LP 44
HUBBARD INC. 52
IBM ALMADEN RESEARCH CENTER 41
IBM 16, 18, 34, 41
IDAHO POWER CO. 1
IDC 12, 14, 16, 47, 48
ILLUMINATA INC. 12
INCOMING CALLS MANAGEMENT INSTITUTE INC. 30
INDUSTRIAL LIGHT & MAGIC 36
INGRAM MICRO INC. 47
INSEAD 50
INTEL CORP. 8, 12, 14, 47
INTELLISEEK INC. 44
INTERLAND INC. 12
INTERMEC TECHNOLOGIES CORP. 21
INTERNATIONAL TRADE COMMISSION 21
IRON MOUNTAIN INC. 7
JUPITER RESEARCH 21
KEYCORP 44
KTF CO. 14
LAWSON SOFTWARE INC. 8
LEADING EDGE FORUM 20
LENOVO GROUP LTD. 21
LG ELECTRONICS INC. 14
LINKEDIN CORP. 58
LOTUS SOFTWARE GROUP 16
LOUISIANA TECHNOLOGY PARK LLC 1
MARRIOTT CORP. 52
MCI INC. 8
MESSAGEONE INC. 1
MICROSOFT CORP. 7, 10, 12, 14, 16, 18, 20, 21, 30, 36, 70
MINDJET CORP. 8
MIT 40, 44
MITEL NETWORKS CORP. 12
MOBILE DIGITAL MEDIA INC. 16
MOLNLYCKE HEALTH CARE AB 16
MONTGOMERY, BARRETT, BROWN, READ, HAMMOND & MINTZ LLP 1
NASA 36, 58
NEC CORP. 8
NETSCOUT SYSTEMS INC. 29
NEWBSYS INC. 16
NICE SYSTEMS LTD. 30
NORTEL NETWORKS CORP. 14
NOVELL INC. 18
O.C. TANNER CO. 52
O'GILVY & MATHER WORLDWIDE 44
OLD DOMINION FREIGHT LINE INC. 52
OPEN SOURCE DEVELOPMENT LABS INC. 18
OPEN SOURCE INITIATIVE 18
ORACLE CORP. 8, 10
OUELLETTE & ASSOCIATES INC. 52
OUTSELL INC. 44
PACIFIC GAS AND ELECTRIC CO. 14
PALM INC. 8, 16, 21
PALMSOURCE INC. 8, 16
PAUL, HASTINGS, JANOFSKY & WALKER LLP 44
PEER 1 NETWORK ENTERPRISES INC. 12
PG&E CORP. 14
PHILADELPHIA STOCK EXCHANGE INC. 12
PHILIPS ELECTRONICS NV 14
PRICELINE.COM 20
PUBSUB CONCEPTS INC. 44
PYTHON SOFTWARE FOUNDATION 36
QUAKER CHEMICAL CORP. 1
QWEST COMMUNICATIONS INTERNATIONAL INC. 8
RABB ASSOCIATES INC. 41
REALNETWORKS INC. 58
RED DOT CORP. 10
REGENT MEDICAL AMERICAS LLC 16
RENT-A-CENTER INC. 44
RESEARCH IN MOTION LTD. 1
SAINT JOSEPH'S COLLEGE 8
SALESFORCE.COM INC. 16
SANA SECURITY INC. 36
SANS INSTITUTE 7
SAP AG 8, 16
SARCOS RESEARCH CORP. 40
SAVI TECHNOLOGY INC. 14
SBC COMMUNICATIONS INC. 8
SCANSOFT INC. 14
SIEBEL SYSTEMS INC. 16
SIMPLY HIRED INC. 58
SIRVA INC. 52
SOFTCON AG 14
SONY CORP. 14
SPRINT NEXTEL CORP. 6
STEVENS INSTITUTE OF TECHNOLOGY 52
SUN MICROSYSTEMS INC. 12
SUN MICROSYSTEMS LABORATORIES 40
SUNGARD DATA SYSTEMS INC. 1
SUSE LINUX AG 18
SYBASE INC. 8
SYMANTEC CORP. 12
SYMBOL TECHNOLOGIES INC. 21
TASTY BAKING CO. 47
TD WATERHOUSE INVESTOR SERVICES INC. 20
THE APACHE SOFTWARE FOUNDATION 8
THE BOEING CO. 8
THE CONFERENCE BOARD INC. 60
THELADDERS.COM INC. 58
TOPCODER EMPLOYMENT SERVICES 56
TPV TECHNOLOGY LTD. 14
TRICON GLOBAL RESTAURANTS INC. 60
TRINITY VENTURES 44
TRW AUTOMOTIVE HOLDINGS CORP. 44
TULANE UNIVERSITY 1
U.S. ARMY CORPS OF ENGINEERS 1
U.S. DEPARTMENT OF COMMERCE 58
U.S. DEPARTMENT OF EDUCATION 58
U.S. DEPARTMENT OF HOMELAND SECURITY 41
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT 58
U.S. DEPARTMENT OF STATE 58
U.S. DEPARTMENT OF TRANSPORTATION 58
U.S. GEOLOGICAL SURVEY 44
U.S. SECURITIES AND EXCHANGE COMMISSION 44
UNIVERSITY OF CALIFORNIA, BERKELEY 36
UNIVERSITY OF CALIFORNIA, LOS ANGELES 44
VALERO ENERGY CORP. 7
VENTANA RESEARCH INC. 16
VERIZON COMMUNICATIONS INC. 8
VERIZON WIRELESS 12, 24
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY 6
VMWARE INC. 12
WELLSPAN HEALTH 1
XB COACHING INC. 48
YAHOO INC. 20
YANKEE GROUP RESEARCH INC. 1
ZIMBRA INC. 16

See Multi-Vendor Interoperability at Work at the World's Largest Storage Solutions Demonstration!

SNIA STORAGE NETWORKING WORLD COMPUTERWORLD

Interoperability & Solutions DEMO

Uniting the World of Storage

Taking place at Storage Networking World, October 24-27, 2005 at the JW Marriott Grande Lakes Resort in Orlando, Florida

The Storage Networking World (SNW) multi-vendor Interoperability & Solutions Demo, taking place October 24-27, 2005, in Orlando, offers you the opportunity to see interoperability in a collaborative and vendor-neutral setting. Whatever your needs – whether it is managing storage with standards-based tools and applications (SMI-S), building on top of an Information Lifecycle Management foundation, or selecting the right building blocks to meet industry regulations – this is the place to see feature sets, supported solutions and interoperability.

Theme Areas in the SNW Interoperability & Solutions Demo:

- **Data Management**
- **Regulatory Compliance and Storage Security**
- **SAN Infrastructure**
- **Storage Management**

Come prepared to get your hands dirty because this time around you'll also get a chance to participate in one of several pre-scheduled hands-on labs featuring exercises involving **IP Storage** and **Storage Virtualization** products.

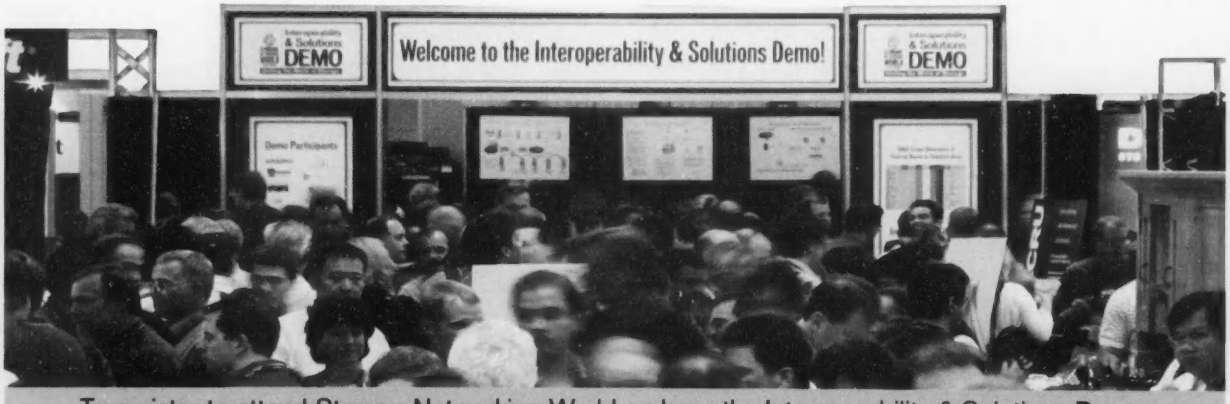
Companies planning to participate at the Fall 2005 Interoperability & Solutions Demo include:

Adaptec, AppIQ, Brocade, Cisco Systems, CA, crosswalk, DECRU, EMC², Finisar, Fujitsu, hp invent, Hitachi Data Systems, IBM, MaXXan, McDATA, Microsoft, NetApp, Nortel Networks, ONStor, QLogic, Quantum, revivio, Silverback, Sun Microsystems, symantec., time)spring

(participants as of 9/7/05)

Produced by:

COMPUTERWORLD SNIA



To register to attend Storage Networking World and see the Interoperability & Solutions Demo, visit **www.snwusa.com**

Continued from page 1

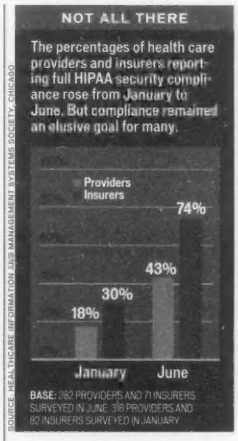
HIPAA

as a weak enforcement component that has many health care organizations feeling that they can take a wait-and-see attitude toward the rules.

Tim Harrison, information security officer at Cincinnati-based Catholic Healthcare Partners, said the $3.2 billion not-for-profit company doesn't expect to be fully compliant with the security mandates for another two years.

CHP, which operates 29 hospitals, has implemented many of the requirements but still needs to address the disaster recovery component, Harrison said. That part of the process has been put off because of a lack of IT staffers to dedicate to the task, he said, noting that CHP's security team has just two workers who are responsible for securing more than 2,000 servers across two data centers.

In addition, HIPAA requires that people with access to protected health information be uniquely identified to an IT system each time they use it, Harrison said. But, he added, that capability can be "next to impossible" to implement efficiently, especially in busy areas such as hospital emergency rooms.



"I'm not sure that any health care organization is ever going to be fully compliant," said William Gillespie, CIO at WellSpan Health, a York, Pa.-based not-for-profit provider that serves over 650,000 people in central Pennsylvania and northern Maryland.

Unlike Y2k compliance, "this takes continuing investments," Gillespie said. WellSpan is about 90% compliant with the security requirements, according to Gillespie. But like CHP, it has yet to address the disaster recovery rules. In addition, WellSpan is still trying to get all 76 of its business partners to sign HIPAA-mandated agreements for protecting confidential health information.

A June survey of 353 health care companies by the Healthcare Information and Management Systems Society (HIMSS) showed that many companies are in the same situation as CHP and WellSpan. Only 74% of the insurers and 43% of the health care providers that responded to the survey said they were fully compliant with the security rules, which took effect April 20 [QuickLink 53677].

Although those figures were an improvement compared with the results of a similar survey done in January, they're still "very surprising," said Joyce Sensmeier, director of informatics at the Chicago-based HIMSS, which represents more than 15,000 individual members and 220 companies.

Several organizations that responded to the June survey said they had chosen not to implement all of the security requirements because they didn't anticipate that it would result in any image problems or legal issues, Sensmeier said.

HIPAA's security rules are being administered by the federal Centers for Medicare & Medicaid Services (CMS). They require companies handling electronic health data to implement fully auditable steps for controlling access to confidential information and protecting the data against compromise and misuse.

HIPAA provides for civil penalties of up to $25,000 and criminal penalties of up to $250,000 per year for noncompliance. But the CMS initiates an enforcement process only if a complaint is filed against a company.

As a result, many businesses are unwilling to invest the money and resources needed to comply, said James Bragg, a former HIPAA security officer at a Tulsa, Okla.-based hospital. Bragg said he was laid off earlier this year after he had implemented "very basic levels of access and audit controls" for the hospital.

Stanley Nachimson, a senior technical adviser in the CMS's Office of Electronic Health Standards and Services, said that the agency has received 26 complaints that are being investigated. But it's "not even close to thinking about assessing any penalties as yet," he added. Instead, the emphasis is on working with companies and giving them a chance to develop corrective action plans, Nachimson said. **56724**

Continued from page 1

Wi-Fi

when they're available and free," Heindel said, noting that Wi-Fi links are often provided at no cost at technology conferences. But, he added, he remains leery of Wi-Fi connections in general because of endpoint security concerns — and he makes sure end users at Idaho Power are aware of those risks.

Not Worth the Hassle

Irving Tyler, CIO at Quaker Chemical Corp. in Conshohocken, Pa., said Wi-Fi is likely to remain little-used by his company's workers. Citing himself as an example, Tyler said it's too complicated to set up Wi-Fi links while waiting for flights, especially since he tries to spend as little time in airports as possible. He also has the advantage of using a BlackBerry handheld from Research In Motion Ltd. to quickly check his e-mail and send short responses.


TYLER says it isn't worth the time it takes to set up an airport Wi-Fi link.

"I'm not going to open up my PC, find the Wi-Fi connection and then start the work unless I'm there for some time," Tyler said. He added that he would have to locate a power outlet for an extended Wi-Fi session, "which isn't easy."

Tyler said Wi-Fi isn't a good value unless a company hires a service provider that sets up connections with thousands of hot-spot vendors for easy billing and connectivity.

The comments of Heindel and Tyler back up poll results released last week by Gartner Inc., which early this year surveyed 2,000 business travelers in the U.S. and the U.K. about Internet and e-mail access issues. Only 25% of the U.S. respondents and 17% of those from the U.K. said they're taking advantage of Wi-Fi hot spots, according to Gartner.

Ken Dulaney, a Gartner analyst who was involved in conducting the survey, described the search for free Wi-Fi connections by business travelers as "the great adult Easter egg hunt."

"Wi-Fi is by no means dead," Dulaney said. But, he added, Wi-Fi vendors need to figure out long-term subscription models that users can tap into more easily. "Because billing systems for Wi-Fi are so fragmented and the coverage [is] so unpredictable, most users pay as you go," he said.

Other Options

Like other IT managers, Heindel is investigating alternatives to Wi-Fi, such as third-generation wireless broadband access services that some network operators offer via a laptop card. Idaho Power is in the midst of evaluating wireless access options for up to 200 field workers and plans to weigh the relative costs of 3G services and satellite communications links, Heindel said.

Zeus Kerravala, an analyst at Yankee Group Research Inc. in Boston, said a user who travels almost constantly might be able to string together reliable Wi-Fi services if he has subscriptions with several vendors. Otherwise, it makes little sense to pay $10 for 24 hours' worth of access — a typical price — if you expect to log on for only an hour, he said.

Kerravala uses Broadband-Access, a wireless service from Verizon Wireless that costs him $80 a month. Verizon is now offering Broadband-Access for $60 a month with the purchase of a $100 laptop card. Kerravala said the service is reliable but slows somewhat during peak usage periods.

However, he added that he would prefer to use Wi-Fi if he could buy a single subscription that provided coverage at all hot spots — similar to the way roaming works on mobile phones. **56686**

WHY-FI, INDEED?

Broadband Internet access services are pricey but allow users to stop being slaves to Wi-Fi, says Don Tennant. **Page 24**

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement [illegible] CANADIAN POSTMASTER: Please return undeliverable copy to PO Box [illegible], Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly; except a single combined issue for the last two weeks in December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171. Copyright 2004 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Reprint Smith, Computerworld Reprints, c/o Reprint Management Services, Greenfield Corporate Center, 1605 Colonial Village Lane, Lancaster, Pa., 17601, (717) 399-1900, Ext. 172. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: reprints@computerworld.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy; U.S. – $99.99 per year; Canada – $130 per year; Central & So. America, $250 per year; Europe – $299 per year; all other countries – $395 per year. Subscriptions call toll-free (888) 559-7327. POSTMASTER: Send Form 3579 (Change of Address) to Computerworld, PO Box 3000, Northbrook, IL 60065-3500.

BPA WORLDWIDE ABM RED TAG

FRANK HAYES ■ FRANKLY SPEAKING

Shame on FEMA

I SUPPOSE IT'S REALLY JUST A LITTLE THING, a footnote in the context of the massive, horrific devastation of Hurricane Katrina. Thousands of people are dead or dying. Hundreds of thousands are homeless. Much of New Orleans is a toxic cesspool. Some smaller Louisiana and Mississippi towns are simply gone, wiped from the face of the earth. You have to get far, far down on the list of horrors to come to this one: The Federal Emergency Management Agency has set up a Web site for survivors of the disaster to apply for aid, but it works only if they're using Internet Explorer 6.

But trivial as that sounds, it matters right now — a lot.

It matters because the dead are dead. The destroyed towns and homes are gone. But for the living, the refugees, top priority has to be putting their lives back together. And there are far too many of them to be helped one at a time by human beings on the other end of a telephone line.

Fortunately, there's also the World Wide Web. It doesn't require a warm body at the other end of the line. It's designed to handle an endless stream of users and handle them efficiently and in large numbers. And it works with old PCs, Macs, Linux machines, handheld computers, cell phones, even video games. It should be a godsend for people struggling to recover from the catastrophe.

So for those who have survived the destruction and are stranded in a community shelter or in the home of a relative, friend or generous stranger, there's got to be something especially bitter in going to *disasteraid.fema.gov* and reading this message: "In order to use this site, you must have JavaScript Enabled and Internet Explorer Version 6. Download it from Microsoft or call 1-800-621-FEMA (3362) to register."

No doubt most of the people who see that message would be perfectly happy to use IE 6 on the PCs they left behind when they had to evacuate. But that's not an option for them now. They're locked out if they're not running Windows and IE 6.

Ever wonder if your technical decisions matter? These hurricane survivors don't.

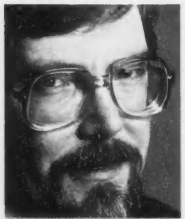
Ever think that cutting a corner that simplifies development but limits who can use your systems is no big deal? Maybe that's true if you're working in a corporate IT shop on a retail Web site or a business-to-business e-commerce application. Then the worst results of your corner-cutting might just be aggravated customers, lost revenue and a reputation for cluelessness.

But for hurricane survivors, the corner-cutting at FEMA is a kick in the throat while they're down. After everything they've been through, it's one more cheap shot when they can least afford it.

The worst part is, it's probably not intentional on the part of whoever built that FEMA Web site. Those developers likely weren't trying to lock anyone out or favor Microsoft. They probably just didn't think about the fact that people coming to a Web site named "disasteraid" might not have their choice of browsers.

Or maybe they did give it a moment's thought but decided that their own convenience mattered more than how usable their Web site would be and that using their favorite tools was more important than following standards.

And so a little pain saved by a few software developers results in lots of pain for thousands of disaster victims.



FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

Ordinarily, I'd call that irresponsible, poor development practice, maybe even incompetent. That's when the cost would be measured in lost business.

But when this sort of foul-up locks out people in desperate need of help, it's not just irresponsible. It's unconscionable. It's shameful.

Sure, it's a little thing in the context of this huge, awful calamity.

It's IT's little part in making the enormity of Hurricane Katrina just a little bit worse. **56681**

Unsafe Assumptions

New retail manager calls pilot fish to complain that the cash register software at his store is constantly crashing. What were you doing when it crashed? fish asks. "It was too slow, so I started hitting the Escape key to speed it up, and something came up on the screen, and I clicked Yes, and the program crashed," says manager. Fish: Didn't you read the message asking if you wanted to quit the program before you clicked Yes? Manager: "I don't have time for that. Can't you make it so it doesn't do that?"

Whoops!

SHARK TANK

Irate VP demands to know why data center power failed one Saturday. "He asks why expensive countermeasures – UPS and diesel generator – failed to protect the data center," says on-scene pilot fish. "After not being able to determine a cause, IT reviews the security video. A person is seen entering the air conditioning room at the precise time the outage occurs. It was the VP. He thought the building was too warm, so he flipped what he thought was the breaker for the A/C – but it was the main breaker for the data center."

Too Trusting

This pilot fish enforces his company's strict policy on noncompany IT equipment: It must be checked over for viruses and spyware before being connected to the network. "I have found numerous infected PCs from users and vendors and dropped their connection," fish says. "But today, the IT director had six consultants in. Three brought the network to a halt. They're IT guys; I didn't think they would be infected, so I didn't look at the PCs. I removed a total of 300 spyware items."

Not Quite

Support pilot fish is troubleshooting a problem for a sales guy who's working from home, but the remote-control session is responding very slowly. "On my screen, I could see he was connected via dial-up," says fish. "He said he had DSL installed just last month but then added that it didn't seem much faster. Turns out he set up the DSL modem per the phone company's instructions – then kept dialing in as usual, assuming that DSL somehow just made his dial-up connection faster!"

Really New

After a long delay, this remote site converts to the corporate system. IT pilot fish knows some users are going to have trouble adjusting, but one sales guy's remark to a customer catches him off-guard: "I'm sorry, but we just switched to this new system, and it doesn't work like the old one. It won't let me ship you something until it exists."

SHIP IT TO SHARKY. Send me your true tale of IT life at **sharky@computerworld.com**. You'll snag a snazzy Shark shirt if I use it. And check out the daily feed, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

Worried about the security of your data?

(We're backing you up.)





Overland REO 4000™ Disk-based Backup and Recovery Appliance

- Storage capacity: 4.2 TB (native)
- Offers SATA, 2U size, Gigabit Ethernet and RAID 5
- Creates 8 iSCSI Virtual Tape Libraries or Drives, disk LUNs, or all three
- Dynamic Virtual Tape feature eliminates the need to define disk
- Compatible with leading backup software providers
- Available in capacities ranging from 4.2TB to 9.4TB

Overland STORAGE

Call
CDW 791018



Adaptec Serial ATA II RAID 1420SA

- Provides a new standard in cost-effective, high-performance storage connectivity and data protection solutions for high-end workstations and entry-level servers
- Up to 300MBps on each data bus when used with SATA II drives
- Supports RAID levels 0, 1 and JBOD
- Connects up to four hard drives
- Fully backward compatible with SATA I drives

adaptec

$109.28
CDW 769812



TDK Dual-layer DVD+R 5-pack

- Capacity: 8.5GB single sided
- Includes jewel cases
- Provides high recording and playback compatibility along with unsurpassed reliability
- Ideal for recording lengthy features and backing up large data archives

TDK

$29.46
CDW 819478

The Storage Solutions You Need When You Need Them.

We don't have to tell you that data loss can be a financial blow to any company. And with more data being stored, more assets are at stake. CDW has a full line of top-name storage solutions that can help you increase capacity and reduce risk. And our account managers have the expertise to ensure you get the right solution for your needs. So you don't just get secure storage, you get peace of mind.

CDW

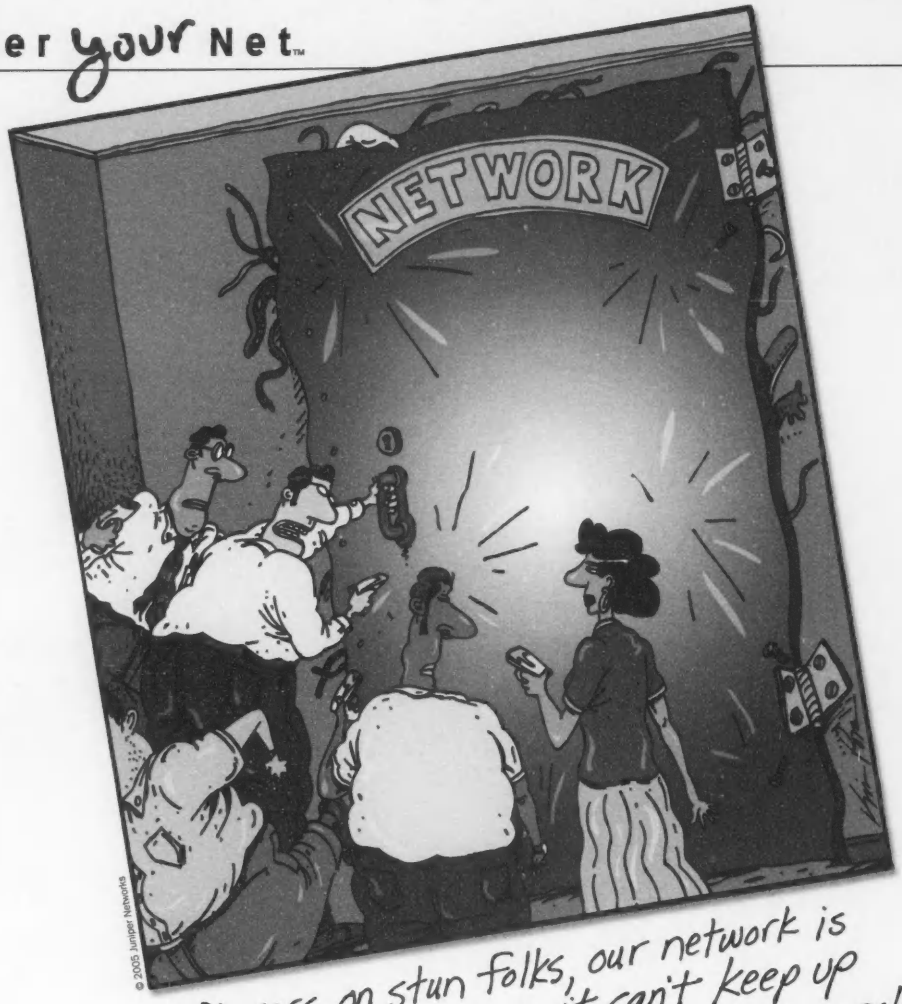
The Right Technology. Right Away.

CDW.com • 800.399.4CDW

In Canada, call 888.898.CDWC • CDW.ca

Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. © 2005 CDW Corporation

Juniper Your Net™



"Phasers on stun folks, our network is going berserk since it can't keep up with our users,.. uh, why didn't we call Juniper in the first place?"

>> Security can't keep pace? Adding branch offices, remote users and personal device after personal device to your network? Then call Juniper Networks for assured – and secure – remote access. Our flexible, industry-leading VPN solutions vigorously secure your network, while delivering outstanding performance for an excellent network experience. Visit **www.juniper.net/vpnguide** for information on how to select the best VPN solution for your business. Stunningly superior service and performance is easy: simply Juniper *your* net.

Juniper NETWORKS

www.juniper.net
888-JUNIPER (888-586-4737)